OPERATING INSTRUCTIONS & SERVICE MANUAL

AM/FM STEREO TUNER

SANSUI TU-9500

Sansui

SANSUI ELECTRIC CO., LTD.

We are grateful for your choice of the TU-9500 AM/FM Stereo Tuner.

For over a quarter of a century, Sansui has been building hi-fi audio equipment, and nothing else. Our mission is very old and at once ever new to use: to bring the reproduced sound closer and closer to the original.

The TU-9500 now in your hands is one answer from us to this never-ending quest. It is a product of the cream of highly advanced modern audio-electronics knowhow, coupled with our long experience. As such, we present it to you with our full confidence.

It offers a multitude of high-performance features, among which are: a sensitive FM frontend utilizing 3 dual-gated MOS FET's and a 5-gang variable capacitor; a low-distortion FM IF amplifier with four bi-resonator ceramic filters and three IC's; a multiplex circuit employing a differential demodulator for improved separation and phase linearity; a sensitive and selective AM tuner with an RF stage and a ceramic filter; a multi-path terminal for correct installation of an FM antenna, and a discriminator output terminal for receiving future discrete 4-channel broadcasts. It also has such refinements as an FM muting switch, an FM/AM noise suppressor switch, two large tuning meters, an FM muting level control, and an FM-75Ω COAXIAL CABLE terminal.

This manual has been prepared to guide you in operating and caring for the tuner correctly, so that you will obtain the most out of its built-in high performance.

May we suggest that you read it once carefully?

CONTENTS

SWITCHES AND CONTROLS

Signal and Tuning Meters

Tune in the desired station while watching these meters.

If you are tuning in an FM station:

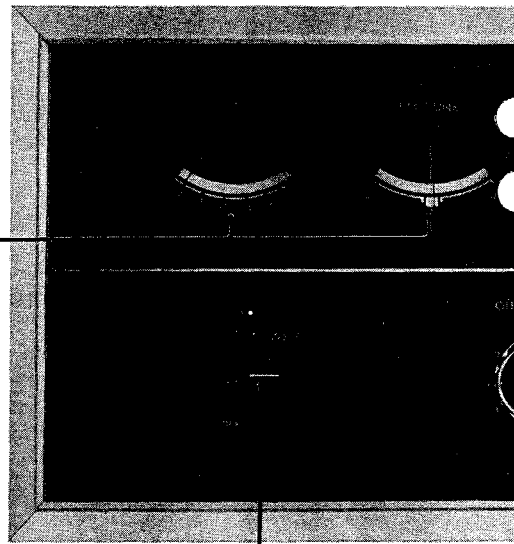
Adjust the Tuning Control first for maximum deflection of the Signal Meter on the left. Then adjust it so that the Tuning Meter on the right will indicate the exact center. The tuner will pinpoint the station and receive it with the best tone quality.

If you are tuning in an AM station:

Simply adjust the Tuning Control for maximum deflection of the Signal Meter. Ignore the Tuning Meter when tuning on AM.

AM Indicator

Lights when the Selector Control is set to AM.



Power Switch

Pull up to ON to turn on the tuner.

Output Level Control

Adjusts the output signal level of the tuner. Turn clockwise to increase it.

Important

As a rule, it is better to use the Output Level Control to match the tuner's output signal level with those of your turntable and tape deck, then adjust the over-all volume with the volume control of your amplifier.

Noise Suppressor Switch

Push down to IN if loud noise is mixed with an FM stereo or AM broadcast. Noise will be suppressed and the broadcast will sound more pleasant to hear.

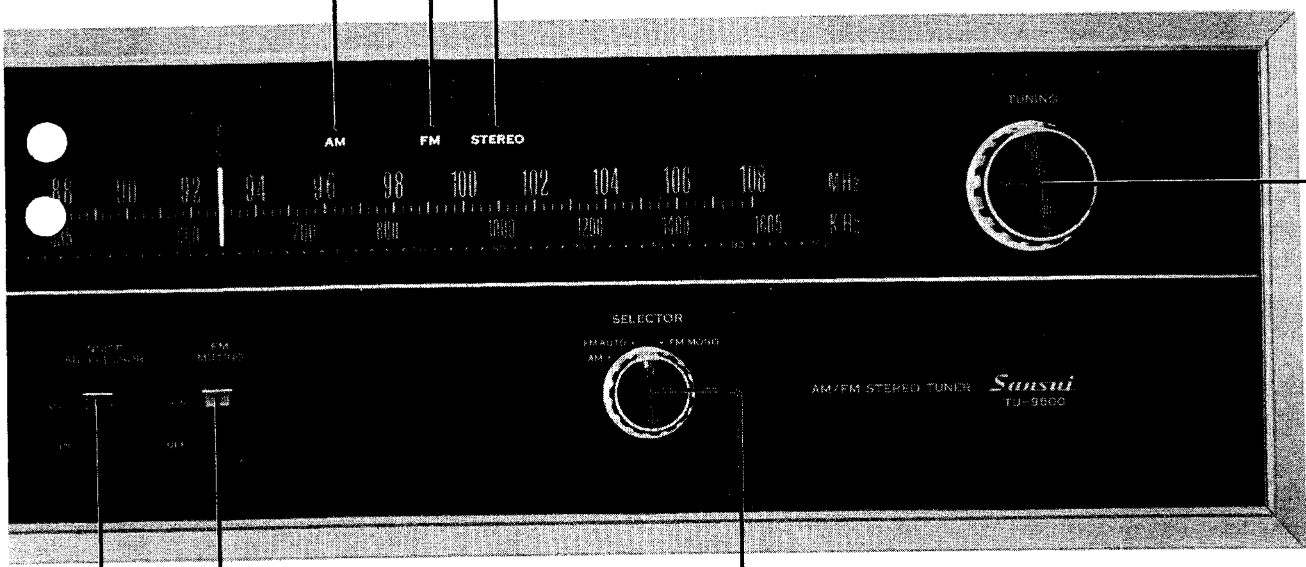
If you hear no noise, be sure to keep it at OUT.

FM Indicator

Lights when the Selector Control is turned to FM AUTO or FM MONO.

FM Stereo Indicator

Lights when the tuner is tuned in on an FM station broadcasting in stereo.



Tuning Control

Tune in the desired station by turning this control.

FM Muting Switch

When tuning on the FM band, noise is usually heard between stations which is peculiar to FM. Setting this switch to ON cuts off that noise and lets you tune quietly.

If you are trying to tune in a weak station, however, setting the switch to ON may cause the tuner to miss it. In that case, it is better to push the switch down to OFF and then tune.

Selector Control

AM: To receive AM broadcasts.

FM AUTO: To receive FM broadcasts, whether stereo or mono. When the broadcasts signal changes from mono to stereo, the tuner will automatically switch itself to stereo reception.

FM MONO: If the FM stereo reception is too noisy for pleasant listening, set the control to this position. The broadcast will be received in mono but the noise will substantially decrease.

CONNECTIONS/OPERATION

Connecting Antennas

The quality of reception depends pretty much on the effectiveness of the antennas. Connect and install them correctly for noise-free pleasant reception.

AM Antennas

AM Ferrite Bar Antenna

The sensitive AM ferrite bar antenna provided on the tuner's rear panel provides a clear AM reception in most areas. To use, simply pull it out as illustrated.

Outdoor AM Antenna

Should the bar antenna fail to give you a clear reception, however, connect a piece of polyvinyl wire supplied to the AM-A terminal on the tuner's rear panel and stretch it outside a window or on the roof. Still better results would be obtained by grounding the tuner.

FM Antennas

T-shaped Feeder Cable Antenna

If you live relatively close to FM stations, quality reception can be usually achieved by just installing the T-shaped feeder cable antenna supplied with the tuner. Connect it to the tuner's FM 300Ω terminals, referring to the diagram at right. Stretch the antenna to a complete T shape, then prepare the tuner for FM reception. Adjust the height and direction of the antenna while actually listening to your favorite FM station.

Outdoor FM Antenna (also see page 7)

If the T-shaped feeder antenna fails to eliminate noise and otherwise give you good sensitivity, install an exclusive FM antenna outdoors. Such an antenna is usually available with either 3, 5 or 7 elements. Generally speaking, the more elements an antenna has, the more sensitive and more directional it is. The rule of thumb is to select one that best suits the needs of your area, and it is recommended to consult your electric appliance dealer. When setting up the antenna, observe the following precautions:

1. As an antenna is directional, adjust its direction while actually listening to your favorite FM station and fix it where it offers the best reception (refer to pages 9 and 10).
2. In order to avoid automobile ignition noise, set it up as far away from streets as possible.
3. Be absolutely sure that it does not contact electric cable and other objects.
4. Be also sure to secure the antenna firmly with the help of the accessory parts supplied with the antenna.

Connect the outdoor antenna to the tuner with feeder cable, connecting the cable to the FM-300Ω terminals on its rear panel. Keep the cable as short as possible, and secure it with clamps and standoffs at proper points. Try to keep away from metallic objects.

If automobile traffic is heavy around your house and the antenna picks up the ignition noise, it is recommended to use coaxial cable instead of feeder. Refer to pages 7 and 8 for connecting instructions.

Connecting to an Amplifier

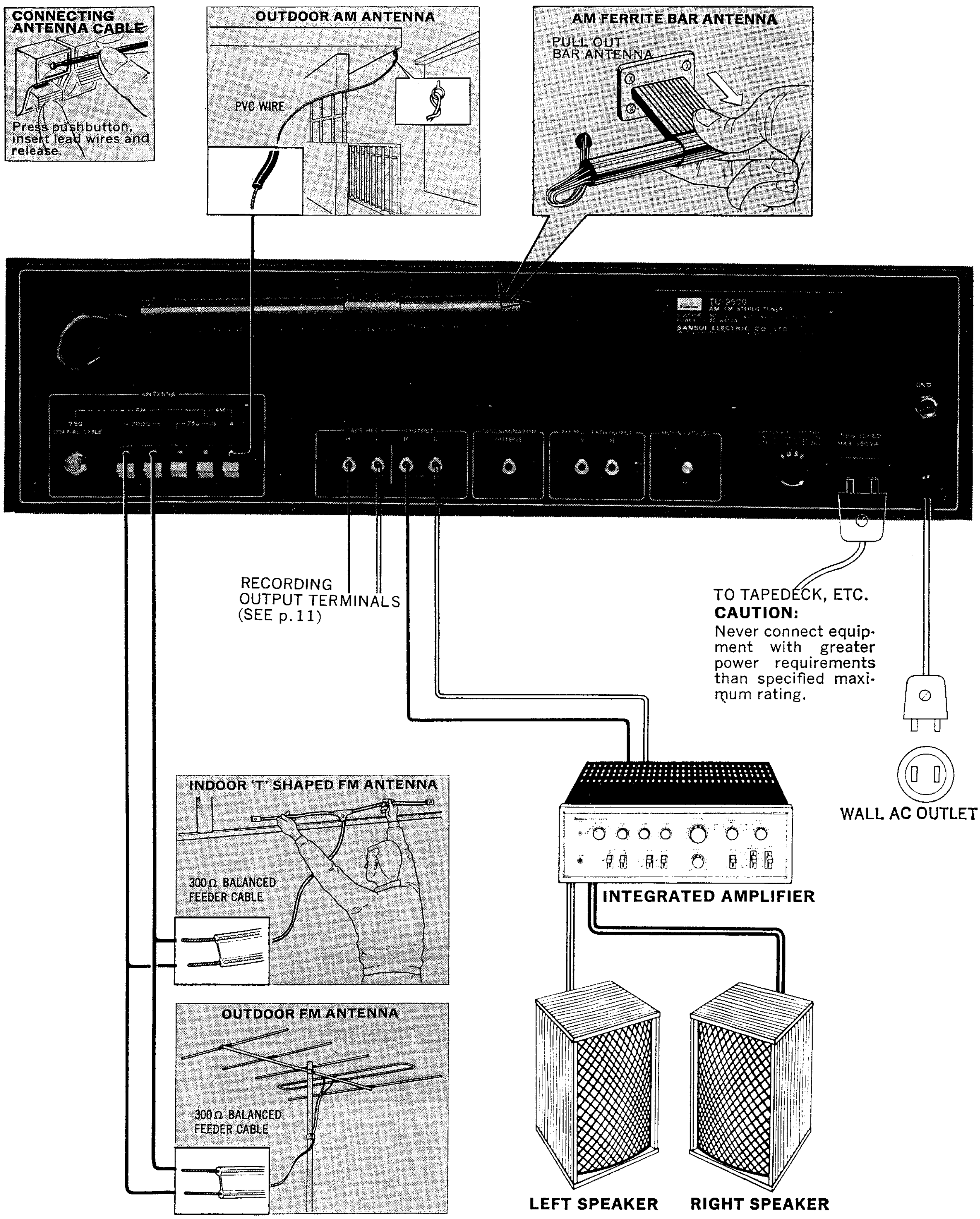
Connect the OUTPUT terminals of the tuner with the TUNER or AUX terminals of your amplifier (integrated amplifier or preamplifier), using the pair of pin plug cables supplied, as illustrated.

FM Reception

1. Set the Selector Control to FM AUTO.
2. Tune in the desired station by turning the Tuning Control. It is pinpointed when the Signal Meter pointer has swung as far to the right as possible and the Tuning Meter pointer is accurately centered.
3. If a stereo broadcast is too noisy, push the Noise Suppressor Switch down to IN. If noise still persists, turn the Selector Control to FM MONO and hear the broadcast in mono.

AM Reception

1. Set the Selector Control to AM.
2. Select the desired station by adjusting the Tuning Control so that the Signal Meter pointer will swing as far to the right as it will go near the frequency of that station.
3. If the broadcast is too noisy, push the Noise Suppressor Switch down to IN.


CONNECTING ANTENNA CABLE
Press pushbutton, insert lead wires and release.
OUTDOOR AM ANTENNA
PVC WIRE
AM FERRITE BAR ANTENNA
PULL OUT BAR ANTENNA
RECORDING OUTPUT TERMINALS (SEE p.11)
TO TAPEDECK, ETC.
CAUTION:
Never connect equipment with greater power requirements than specified maximum rating.
WALL AC OUTLET
INDOOR 'T' SHAPED FM ANTENNA
300Ω BALANCED FEEDER CABLE
INTEGRATED AMPLIFIER
OUTDOOR FM ANTENNA
300Ω BALANCED FEEDER CABLE
LEFT SPEAKER
RIGHT SPEAKER

CONNECTING OUTDOOR FM ANTENNA WITH COAXIAL CABLE

An outdoor FM antenna my be connected with coaxial cable to the tuner's FM-75Ω terminals, or to its exclusive 75Ω COAXIAL CABLE terminal utilizing the special connector supplied.

An FM antenna may have an impedance of 300Ω or 75Ω. Since coaxial cable itself has an impedance of 75Ω, it is necessary that your antenna has the same impedance. If it is a 300Ω type, an impedance matching transformer (commercially available) that reduces 300Ω to 75Ω needs to be inserted between the antenna and the coaxial cable.

FM-75Ω Terminals

Connect the shield of the coaxial cable to the G terminal.

75Ω COAXIAL CABLE Terminal

Use the special connector supplied to connect coaxial cable to this terminal.

How to Connect Coaxial Cable to Connector

Preparation

1. Take out the connector and ring from the accessory parts bag.

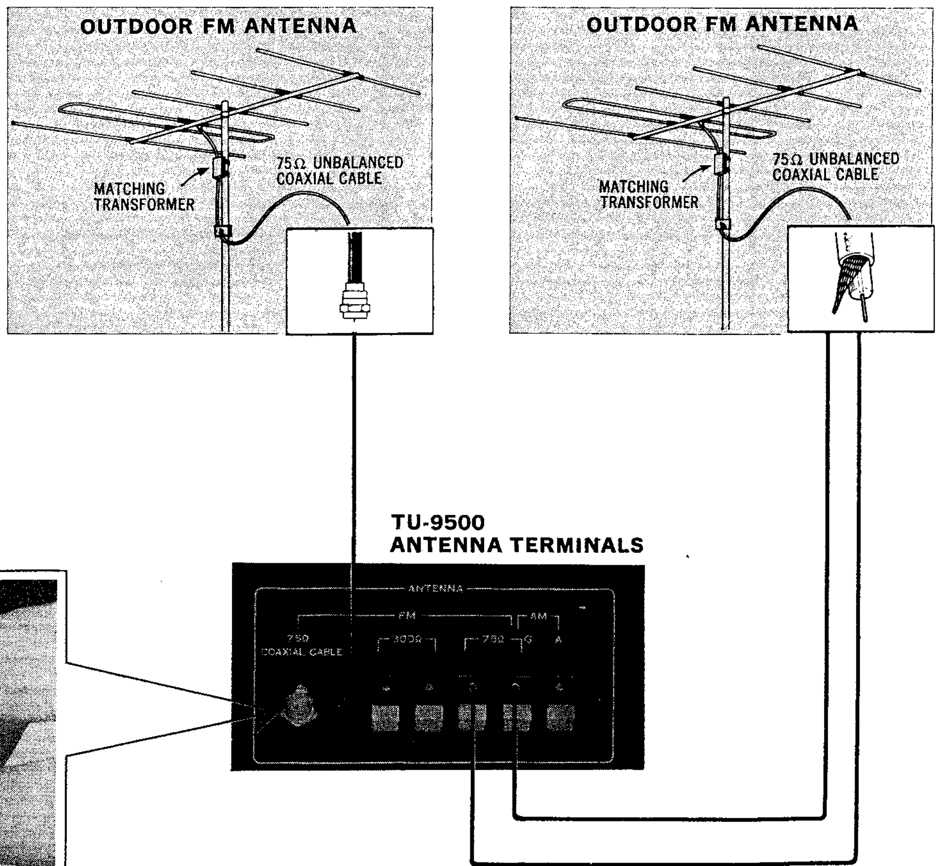
2. Keep the required length of coaxial cable on hand. Different types of coaxial cable are commercially available, but use the type called the 3C-2V. This type is sometimes available either with a stranded core wire or a single core wire, but be sure to use the latter kind.

3. Prepare a knife, nippers and pliers.

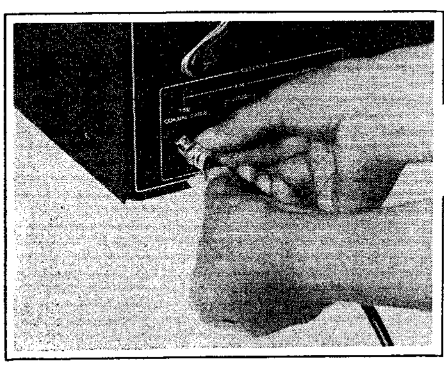
Procedure

Connect the coaxial cable to the connector as instructed in the diagram at right.

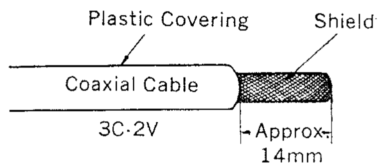
Note: When connecting the connector to the 75Ω COAXIAL CABLE terminal, hold the coaxial cable still with fingers of one hand and turn the tightening nut with the other hand.



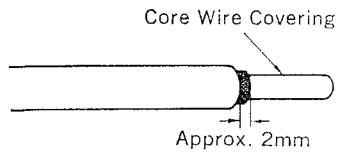
Note: No matching transformer is needed if using a 75Ω antenna.



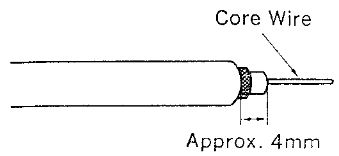
HOW TO CONNECT COAXIAL CABLE TO CONNECTOR

1. 

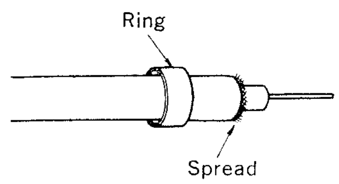
Remove plastic covering and expose shielded cable

2. 

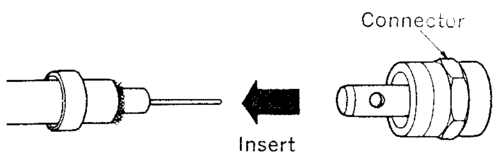
Remove shield, leaving only about 2mm of it

3. 

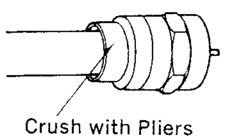
Remove core wire covering, taking care not to scrape core wire

4. 

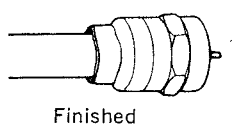
Pass cable through ring, then spread shield

5. 

Firmly insert cable into connector

6. 

Pushing ring toward connector, crush ring with pliers to fix cable to connector

7. 

HOW TO INSTALL OUTDOOR FM ANTENNA CORRECTLY

How to Use Multi-Path Terminals

As the radio wave used for FM broadcast is of high frequencies, it possesses a natural tendency to advance straight ahead and be reflected by various obstacles just as a light beam does. As a result, an antenna receives both the radio wave arriving directly from the broadcast station and the waves reflected by nearby mountains, tall buildings and so forth. This phenomenon is called a multi-path reception.

When this condition is present, the radio waves interfere with one another and cause amplitude and phase modulations, which result in distortion and reduced separation. To minimize this condition, it is necessary to select an antenna with good directionality and also direct it correctly.

The multi-path condition can be visually observed by connecting an oscilloscope to the FM MULTI-PATH OUTPUT terminals on the rear panel of the tuner, so that you may install the antenna in the correct direction.

The two terminals (indicated as V and H) deliver the output signals described below:

V: Delivers the detector output of signals amplitude-modulated by the multi-path phenomenon, if any. If no multi-path phenomenon exists, no output will be provided.

H: Delivers the tuner's discriminator output signal, whose level changes with the level of the original audio signal.

How to Connect and Operate an Oscilloscope

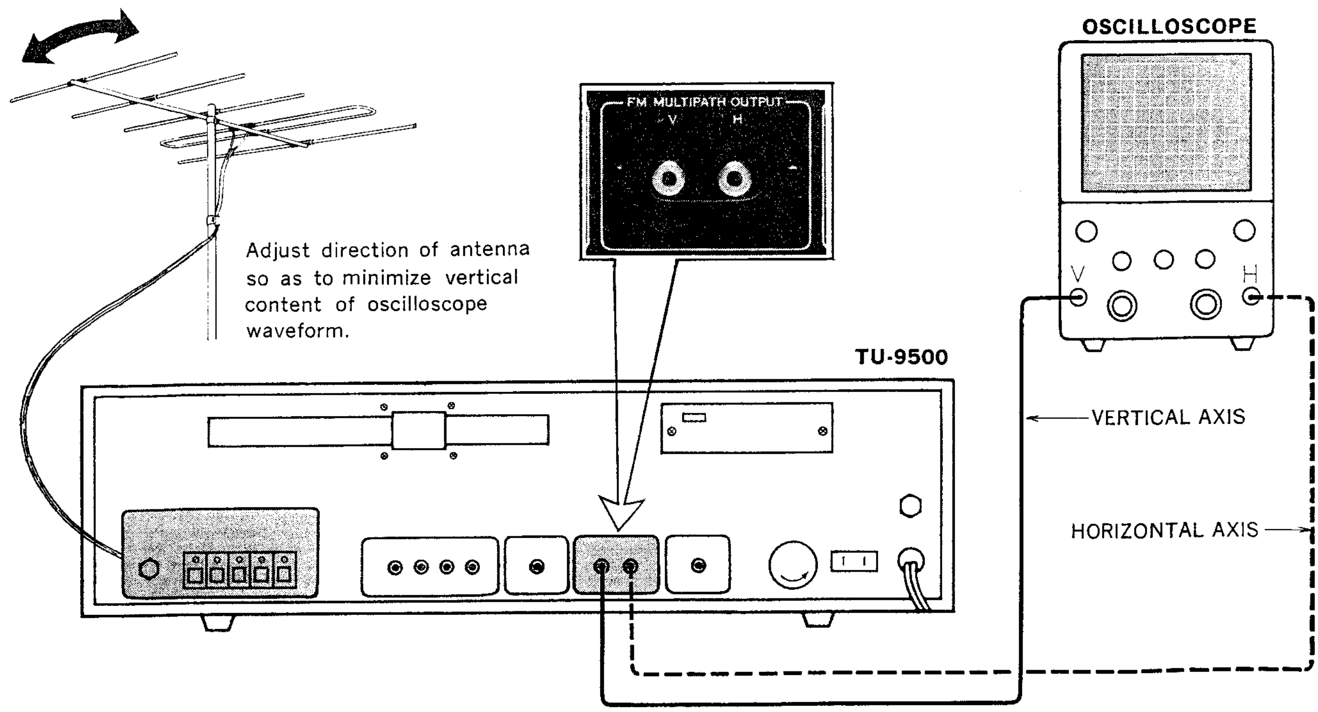
1. Connect the oscilloscope to the FM MULTI-PATH OUTPUT terminals as indicated in the diagram below—namely, its vertical axis to the V terminal and its horizontal axis to the H terminal.

2. Tune in your favorite FM station accurately while watching the two tuning meters, and actually receive it.

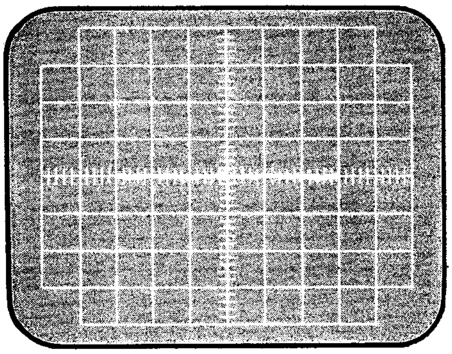
3. Observe the waveform on the oscilloscope. Set the vertical axis sensitivity of the oscilloscope to 10mV/cm while raising its horizontal axis sensitivity to an optimum level.

4. Adjust the position and direction of the antenna and fix it where the height of the waveform is minimized.

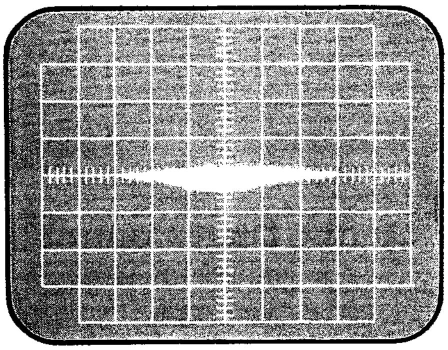
See a sample oscilloscope waveform on the next page.



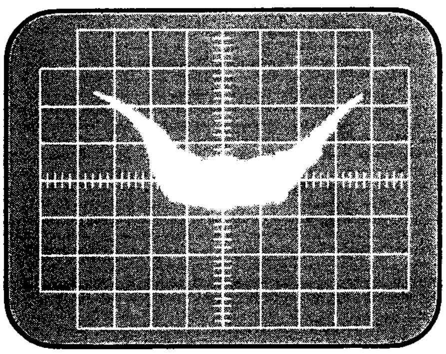
SAMPLE OSCILLOSCOPE WAVEFORMS OF MULTI-PATH PHENOMENON



When no multi-path phenomenon exists



When a slight multi-path phenomenon exists



When a serious multi-path phenomenon exists

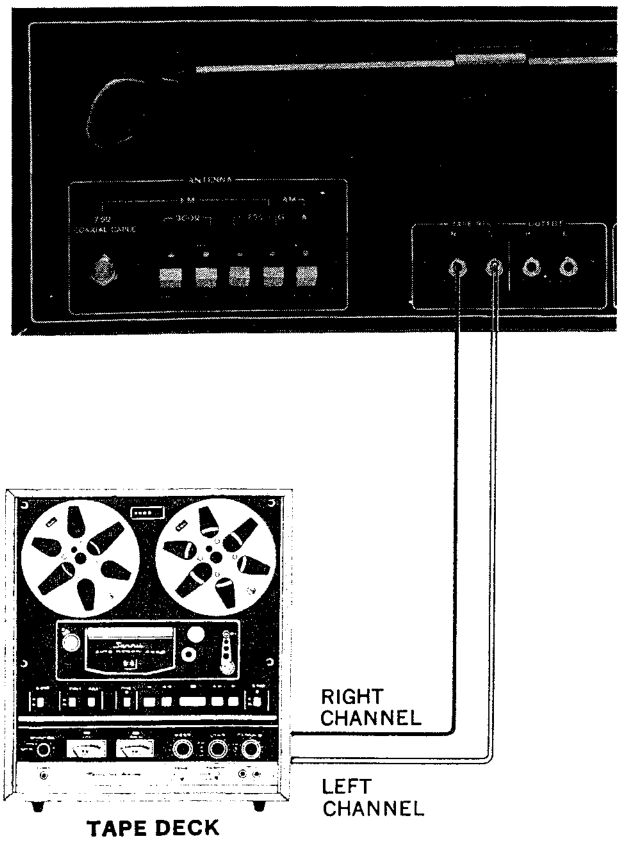
SIMPLE MAINTENANCE HINTS

Recording into a Tape Deck

Radio broadcast can be recorded by connecting a tape deck to the tuner.
Connect the TAPE REC terminals on the rear panel with the recording inputs of a tape deck (often indicated as LINE INPUT), utilizing shielded cables with pin plugs.

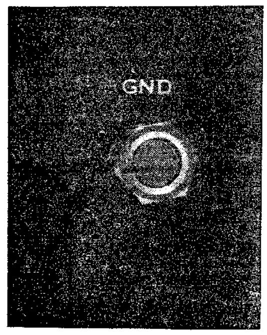
How to Record

1. Tune in the desired station.
2. Engage the tape deck in the recording mode. The signal level at the TAPE REC terminals is constant regardless of the OUTPUT LEVEL control on the front panel. Adjust the recording level with controls on your tape deck.



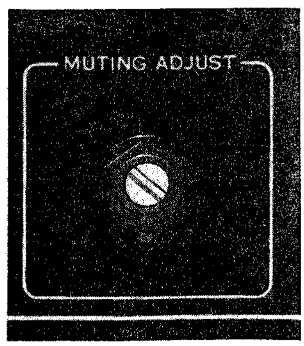
GND Terminal

Normally it is unnecessary to connecting anything to the GND terminal on the rear panel. If considerable noise or hum is heard with the reception, however, connect one end of enameled or vinyl-coated wire to this terminal, then connect its other end to the household water piping (lead) or attach a copper plate to it and bury it underground. Noise may decrease. The G antenna terminal may also be used for the same purpose.
Note: Never connect the GND terminal with the household gas piping, as it is very dangerous.



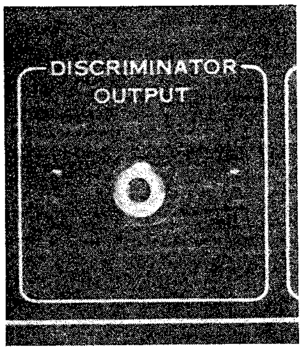
Muting Level Control

This rear-panel control adjusts the working level of the FM muting circuit. Normally there is no need to touch it, but adjust it in these instances:
1. Turn it counterclockwise if the desired FM station(s) is cut off and cannot be received when you turn on the FM Muting Switch.
2. Turn it clockwise if you wish to receive only strong stations.



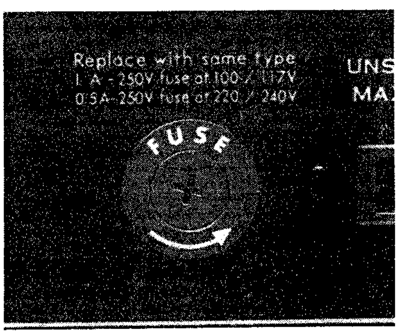
Discriminator Output Terminals

Four-channel stereo is fast becoming popular as a means of reproducing the live sound field. Four-channel stereo FM broadcasts are already underway in some areas of the world using matrix four-channel systems, but the discrete 4-channel system will also be introduced to FM in the future.
To receive discrete 4-channel stereo FM broadcasts, you will need an adaptor in addition to the TU-9500. The DISCRIMINATOR OUTPUT terminal on the tuner's rear panel is for connecting such adaptor.



Should the Power Fuse Blow

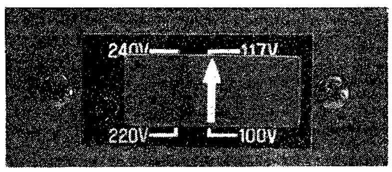
If the dial fails to glow and the tuner remains dead when you turn on the Power Switch, it is possible that its power fuse has blown.
Should this happen, disconnect the power cord from the wall AC outlet at once and examine the power fuse on the rear panel. If you find it blown, find out the cause of the blowout and eliminate it, then replace the blown fuse with a new glass-tubed fuse of the rated capacity (1-ampere for 100/117 volt operation, 0.5-ampere for 220/240 volt operation). Never use a fuse of a different capacity or a piece of wire, even as a stopgap measure, or serious danger could result.



Voltage Adjustment

The TU-9500 is equipped with a Voltage Selector so that it may be used anywhere in the world. It is set to the correct voltage of your area prior to shipment from our factory, and there is no need to touch it. But if you move after purchasing the tuner and find the power supply voltage is different, reset the selector as follows:

1. Remove the two screws securing the name plate on the rear panel, then remove the name plate.
2. Unplug the Voltage Selector once, and reset it so that the arrow mark on it faces the correct voltage indication.
3. Change the power fuses as well whenever the voltage has changed. For 100-117 volt operation, use a 1-ampere glass-tubed fuse. For 220-240 volt operation, use a 0.5-ampere one.
4. Where the power supply voltage considerably fluctuate, the Voltage Selector may be reset to avoid the unpleasant side effects of such fluctuation. Reset it to the voltage immediately higher than the peak of the fluctuation.



Servicing

Should anything ever go wrong with your TU-9500 or if you have any question about it, please contact the Sansui dealer from whom you purchased it or your nearest Authorized Sansui Service Station.

GENERAL TROUBLESHOOTING CHART

Many of the troubles which seem to be a fault of the tuner may be caused by wrong operation or by outside devices. These can be easily corrected by simple checking and easy remedies. If you notice a condition which looks like a breakdown of the tuner, examine the various connections and your operating procedure once, then look up the condition in the following chart to see if it cannot be easily removed. If this fails to improve the situation and the tuner definitely seems faulty, please contact the Sansui dealer from whom you purchased the tuner or your nearest Authorized Sansui Service Station.

PROGRAM	SYMPTOM	PROBABLE CAUSE	WHAT TO DO
AM, FM or MPX reception	• Constant or intermittent noise heard at times or in certain areas.	* Discharge or oscillation caused by electrical appliances, such as fluorescent lamp, TV set, D.C. motor, rectifier or oscillator. * Natural phenomena, such as atmospheric, static or thunderbolts. * Insufficient antenna input due to ferroconcrete wall or long distance from station.	* Attach noise limiter to electrical appliance producing noise, or attach it to tuner's power source. * Install outdoor antenna and ground tuner to raise S/N ratio. * Reverse power cord plug/receptacle connections. * If noise occurs at certain frequency, attach wave trap to input. * Keep tuner at proper distance from other electrical appliances.
FM reception	• Noisy.	* Poor noise limiter effect or too low S/N ratio due to insufficient antenna input. Note: FM reception is affected considerably by transmitting conditions of station, such as power and antenna efficiency. As a result, you may receive one station quite well while receiving another station poorly.	* Install antenna (supplied) for maximum signal strength. * If this does not prove effective, use exclusive FM outdoor antenna. * Excessively long lead-in wire of antenna may cause noise.
	• A series of pops.	* Ignition noise caused by starting of nearby automobile engine.	* Install antenna and its lead-in wire at proper distance from street or increase antenna input.
	• Tuning noise between station.	* Results from nature of FM reception. * FM Muting Switch at OFF.	* Turn on FM Muting Switch. * Ditto.
FM-MPX reception	• Noise heard during FM-MPX reception but inaudible during FM mono reception.	* Weaker signal because service area of FM-MPX broadcast is only half that of FM mono broadcast.	* Orient antenna for maximum antenna input. * Set Noise Suppressor Switch to IN position.
AM reception	• Noise heard at particular time of day, in certain area or over part of dial.	* Peculiar to AM broadcasts.	* Install antenna for maximum antenna efficiency. See 'AM Antennas'. * Set Noise Suppressor Switch to IN position. * In some cases, noise can be eliminated by grounding tuner or reversing power cord plug/receptacle connections.
	• High-frequency noise.	* Beat interference by adjacent station. * TV set too close to stereo systems.	* Turn on amplifier's High Filter. * Set Noise Suppressor Switch to IN position. * Keep TV set at proper distance from stereo system.

SPECIFICATIONS/ACCESSORIES

FM SECTION

TUNING RANGE:	88 to 108MHz
SENSITIVITY (IHF):	1.7μV
QUIETING SLOPE:	40dB 1.7μV, 50dB 3μV, 60dB 10μV, 70dB 50μV
TOTAL HARMONIC DISTORTION	
(MONO):	less than 0.2%
(STEREO):	less than 0.3%
SIGNAL TO NOISE RATIO:	better than 75dB
SELECTIVITY:	better than 80dB
CAPTURE RATIO(IHF):	1.5dB
IMAGE FREQUENCY REJECTION:	better than 100dB
IF REJECTION:	better than 100dB
SPURIOUS RESPONSE REJECTION:	better than 100dB
STEREO SEPARATION:	better than 40dB at 400Hz, better than 30dB at 10,000Hz
SPURIOUS RADIATION:	less than 34dB
ANTENNA INPUT IMPEDANCE:	300Ω balanced, 75Ω unbalanced
FREQUENCY RESPONSE:	30 to 15,000Hz +0.5dB, −2.0dB

AM SECTION

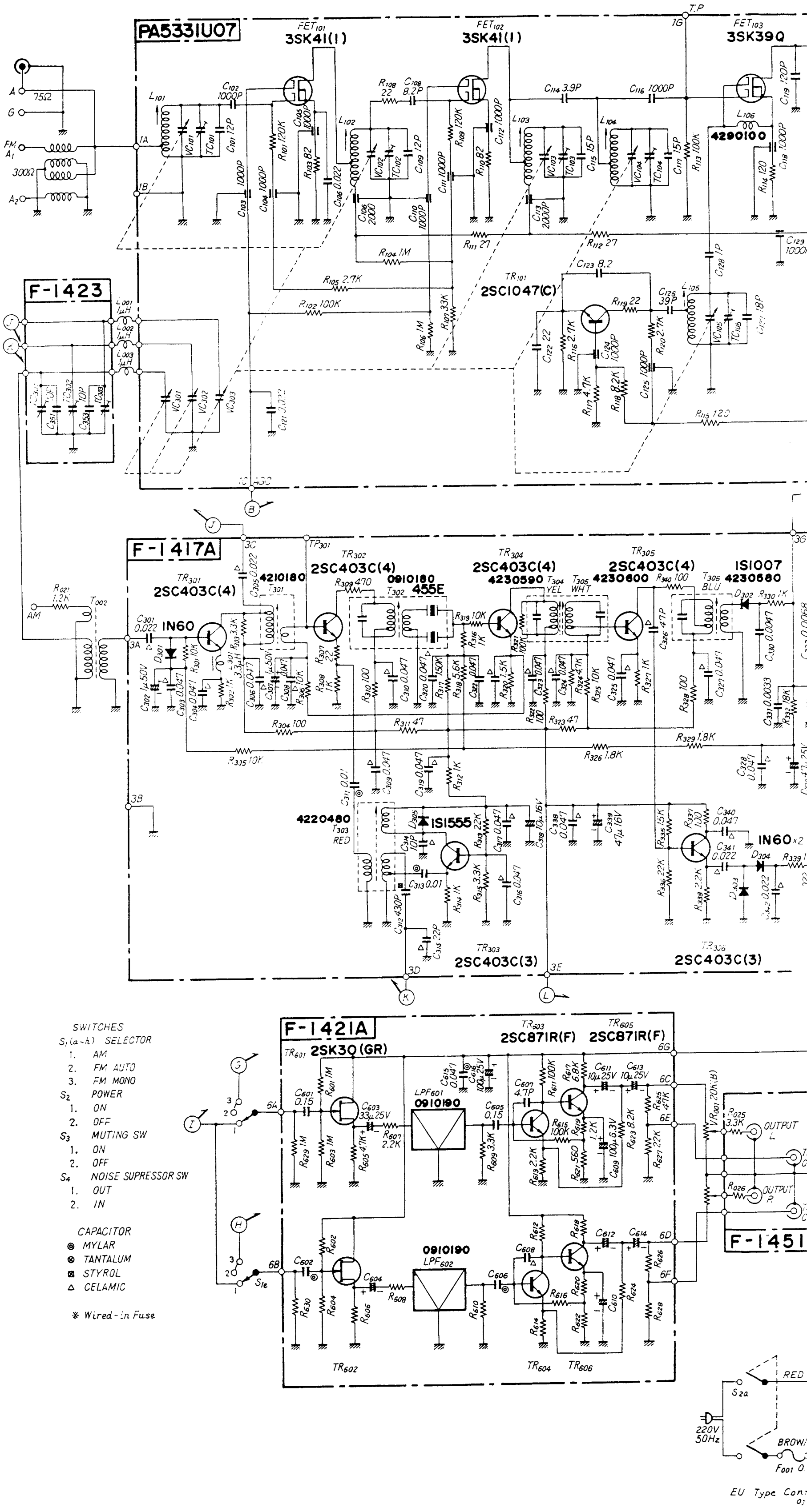
TUNING RANGE:	535 to 1,605kHz
SENSITIVITY (Bar Antenna):	46dB/m
SELECTIVITY :	better than 25dB
IMAGE FREQUENCY REJECTION:	better than 100dB/m at 1,000kHz
IF REJECTION:	better than 100dB/m at 1,000kHz

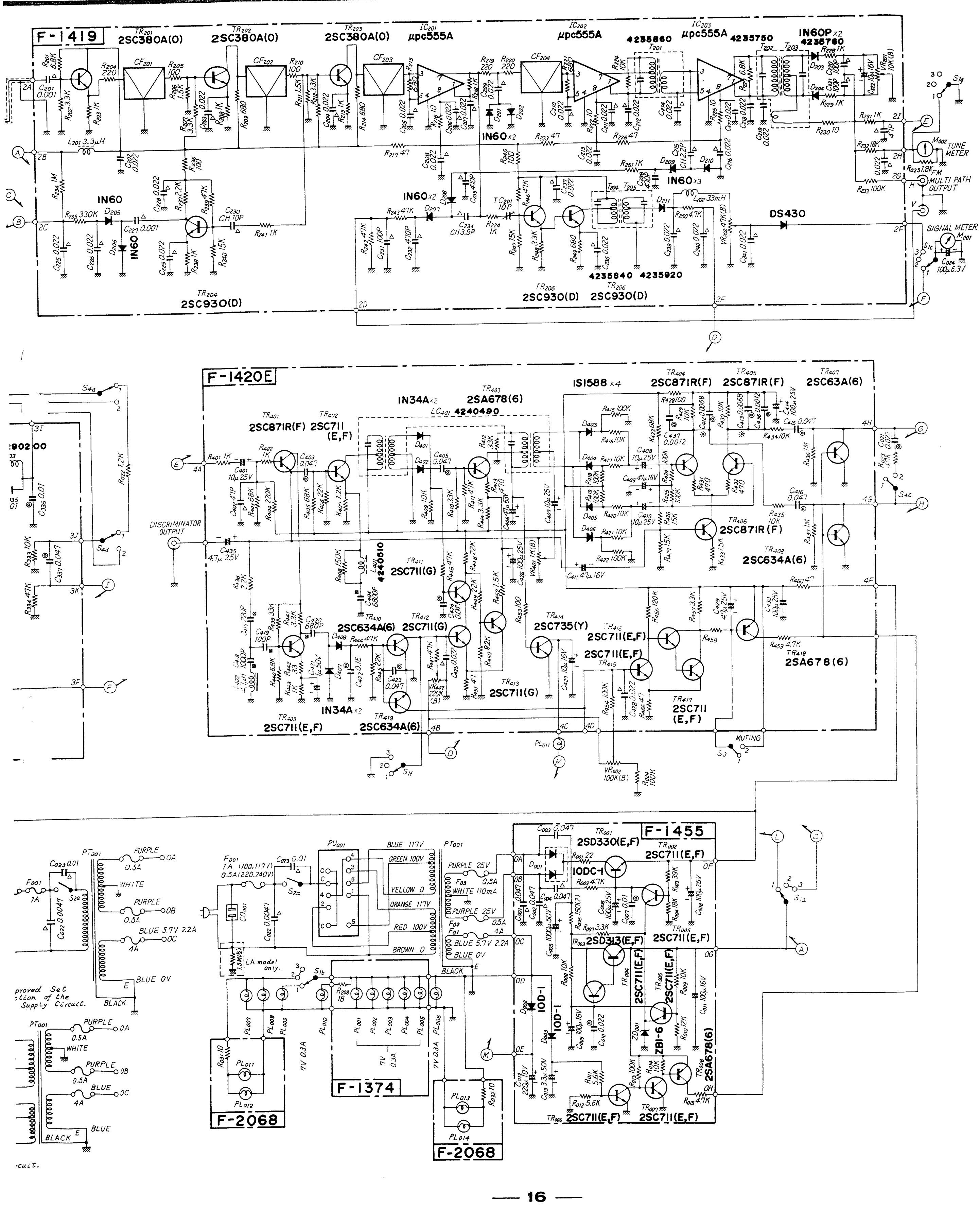
OUTPUT:	0 to 1V
REC OUTPUT:	0.4V
CONTROL AND SWITCHES:	
SELECTOR:	AM, FM AUTO, FM MONO
FM MUTING:	ON, OFF
NOISE SUPPRESSOR:	OUT, IN
SEMICONDUCTORS:	44 Transistors, 5 FETs, 28 Diodes, 3 ICs
POWER REQUIREMENTS:	
POWER VOLTAGE:	100, 117, 220, 240V 50/60Hz
POWER CONSUMPTION:	25VA (Max.) 20W (Rated)
DIMENSIONS:	500mm, 19 11/16" W. 140mm, 5 9/16" H. 347mm, 13 11/16" D.
WEIGHT:	9.5kg (20.8 lbs)

ACCESSORIES

1. FM Antenna.. 1
2. AM Antenna.. 1
3. Connection Cable with Pin Plugs 2
4. Polishing Cloth 1
5. Butterfly Bolts.................................... 2
6. Washers 2
7. Operating Instructions and Service Manual 1
8. Operating Instructions Sheet 1

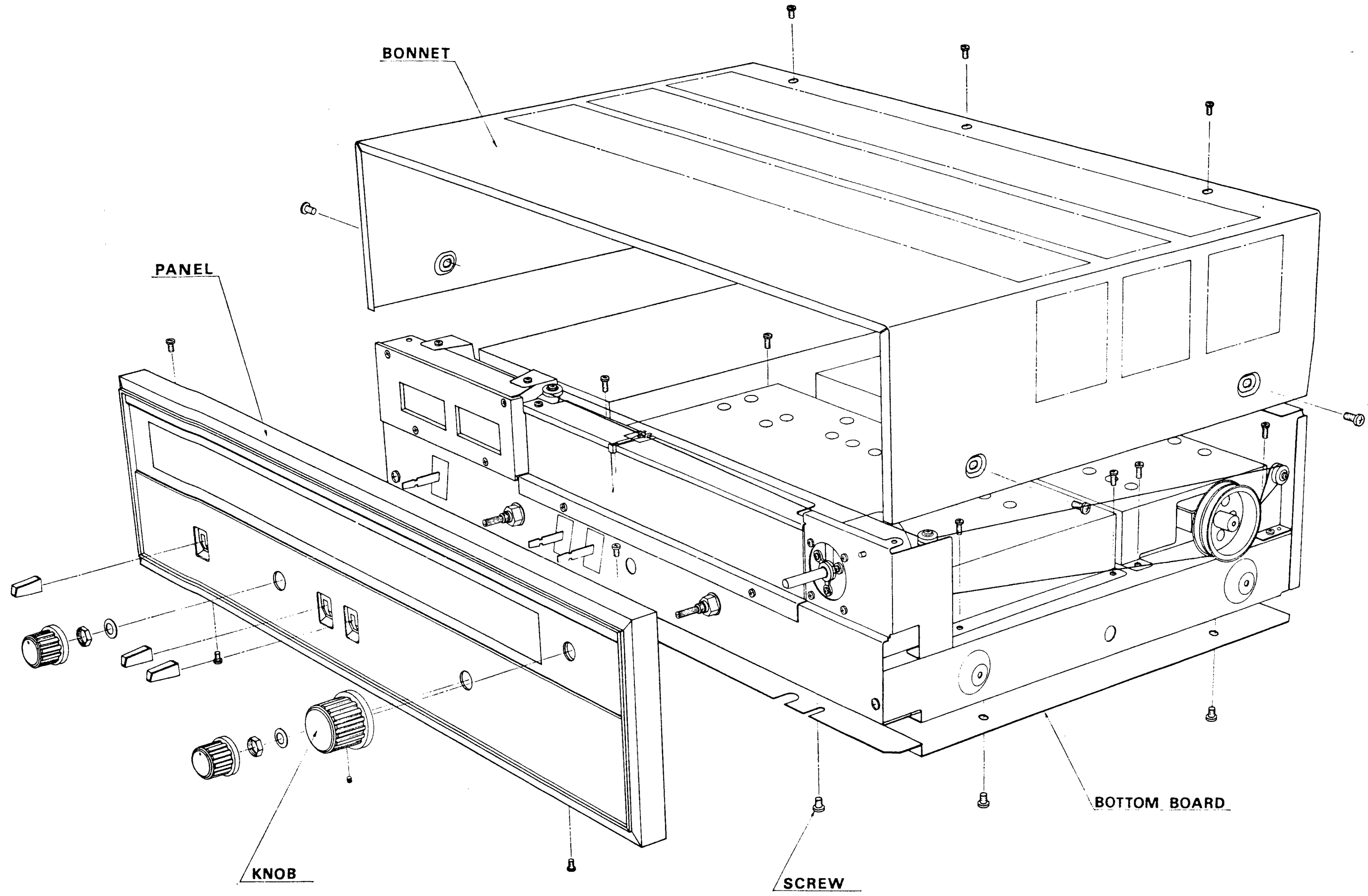
SCHEMATIC DIAGRAM



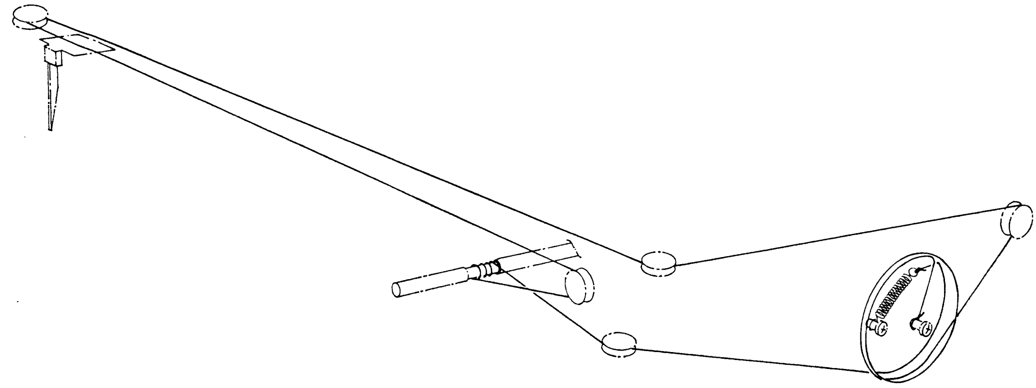

F-1419
F-1420E
F-1455
F-1374
F-2068
F-2068
DISCRIMINATOR OUTPUT
TUNE METER
MULTI PATH OUTPUT
SIGNAL METER
MUTING

DISASSEMBLY PROCEDURE

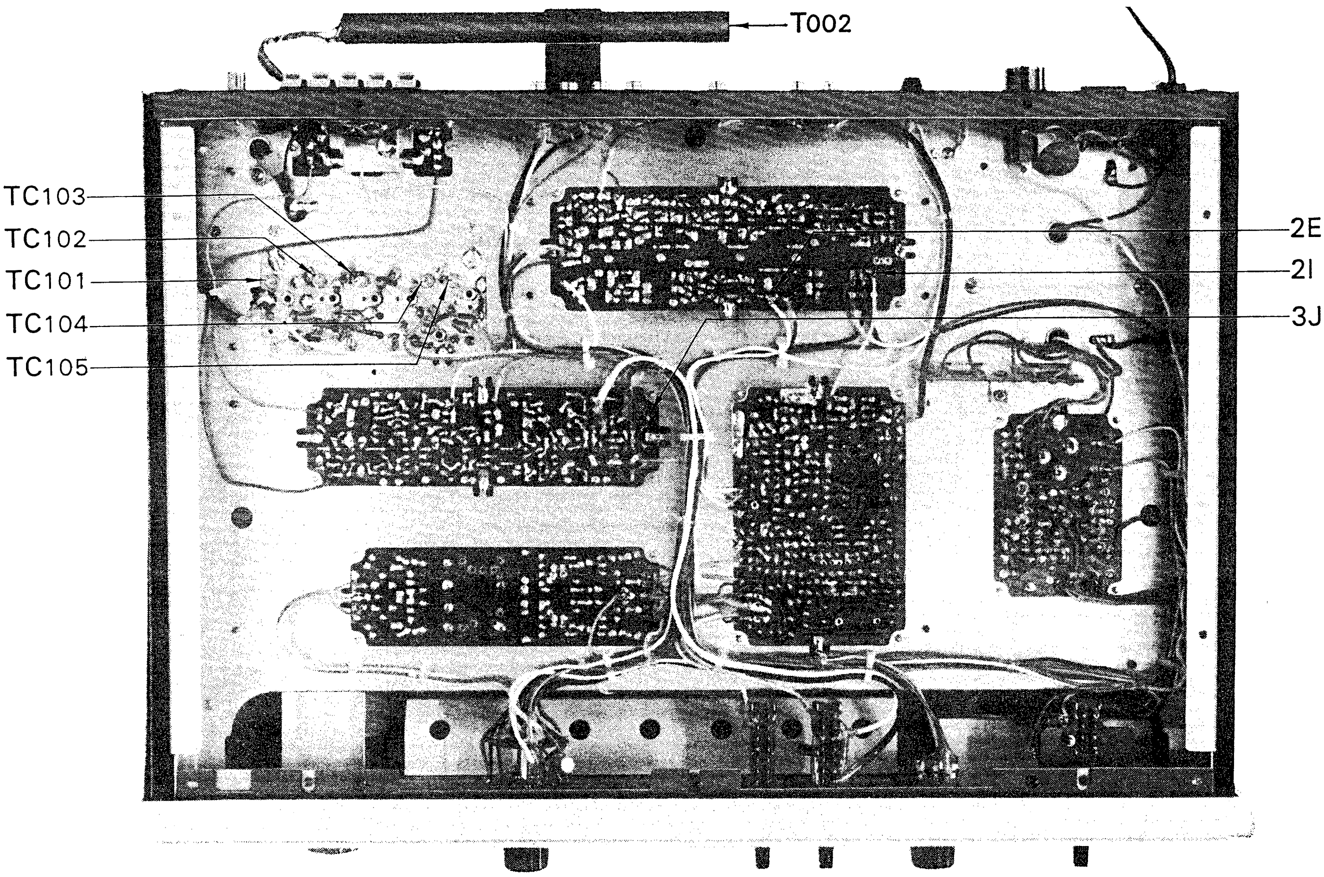
REMOVING FRONT PANEL, BONNET AND BOTTOM BOARD

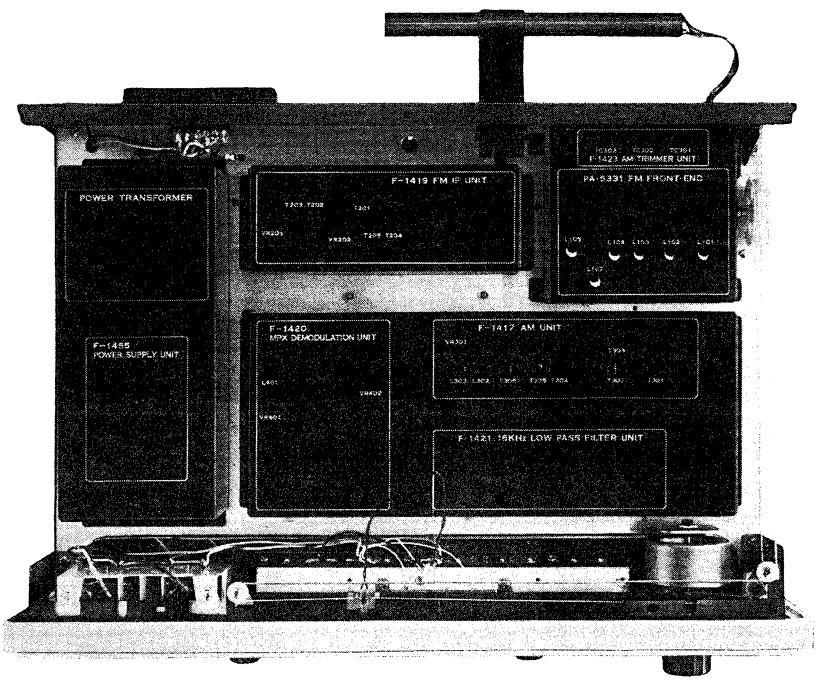


DIAL MECHANISM



TEST POINTS





It is unnecessary to remove cover for printed circuit board when making alignments. Part numbers required for making alignments are indicated on cover.

ALIGNMENT

FM TUNER SECTION

STEP	FEED SIGNAL		MEASURE OUTPUT		SET TUNING CONTROL TO	ADJUST	ADJUST FOR
	FROM	TO	AT	WITH			
1.	Sweep generator 10.7MHz ±200kHz (output 60dB)	2A (via 10pF ceramic capacitor)	2I	Oscilloscope		$T_{202, 203}$	S curve
2.	Sweep generator 10.7MHz ±200kHz (output at limiter point)	2A (via 10pF ceramic capacitor)	2E	Oscilloscope		$T_{204, 205}$	Match centers of S curve and output waveform of meter(see Fig. 1)
3.	FM signal generator 98MHz (400Hz 100% mod., output 60dB)	Antenna terminal	Output terminal	Oscilloscope & V.T.V.M.	98MHz	L_{107}, T_{201}	Max. output
4.	FM signal generator 98MHz (400Hz 100% mod., output : 60dB)	Antenna terminal	Output terminal	Oscilloscope & distortion meter	98MHz	T_{202}	Min. distortion factor
5.	FM signal generator 88MHz (400Hz 100% mod.)	Antenna terminal	Output terminal	Oscilloscope & V.T.V.M.	88MHz	L_{105}	Max. output
6.	FM signal generator 108MHz (400Hz 100% mod.)	Antenna terminnl	Output terminal	Oscilloscope & V.T.V.M.	108MHz	TC_{105}	Max. output
7.	Repat steps 5, 6						
8.	FM signal generator 90MHz (400Hz 100% mod., output at limiter point)	Antenna terminnl	Output terminal	Oscilloscope & V.T.V.M.	90MHz	$L_{101, 102, 103, 104}$	Max. output
9.	FM signal generator 106MHz (400Hz 100% mod., output at limiter point)	Antenna terminal	Output terminal	Oscilloscope & V.T.V.M.	106MHz	$TC_{101, 102, 103, 104}$	Max. output
10.	Repeat steps 8, 9						

FM MPX SECTION

STEP	FEED SIGNAL		MEASURE OUTPUT		SET TUNING CONTROL TO	ADJUST	ADJUST FOR
	FROM	TO	AT	WITH			
1.	FM signal generator 98MHz & stereo signal generator (composite signal containing pilot signal, L ch. 40% mod.)	Antenna terminal	Output terminal (L ch.)	Oscilloscope V.T.V.M. & distortion meter	98MHz	L_{401}	VR_{401} Center. Max. output, Min. distortion in L ch.
2.	FM signal generator 98MHz & stereo signal generator (composite signal containing pilot signal, L ch. 40% mod.)	Antenna terminal	Output terminal (R ch.)	Oscilloscope & V.T.V.M.	98MHz	VR_{401}	Min. output in R ch.

AM TUNER SECTION

STEP	FEED SIGNAL		MEASURE OUTPUT		SET TUNING CONTROL TO	ADJUST	ADJUST FOR
	FROM	TO	AT	WITH			
1.	Sweep generator 455kHz ±30kHz	Antenna terminal	3J (F-1417A)	Oscilloscope	Any frequency not occupied by broadcast stations	$T_{302,\ 304,\ 305,\ 306}$	Best AM IF waveform (set Noise Suppressor SW to OUT)
2.	AM signal generator 535kHz (400Hz 30% mod.)	Antenna terminal	Output terminal	Oscilloscope & V.T.V.M.	535kHz	T_{303}	Max. output
3.	AM signal generator 1600kHz (400Hz 30% mod.)	Antenna terminal	Output terminal	Oscilloscope & V.T.V.M.	1600kHz	TC_{302}	Max. output
4.	Repeat steps 2, 3						
5.	AM signal generator 600kHz (400Hz 30% mod.)	Antenna terminal	Output terminal	Oscilloscope & V.T.V.M.	600kHz	$T_{002,\ 301}$	Max. output
6.	AM signal generator 1400kHz (400Hz 30% mod.)	Antenna terminal	Output terminal	Oscilloscope & V.T.V.M.	1400kHz	$TC_{301,\ 303}$	Max. output
7.	Repeat steps 5, 6						

FM DISCRIMINATOR WAVEFORM

OUTPUT WAVEFORM OF METER

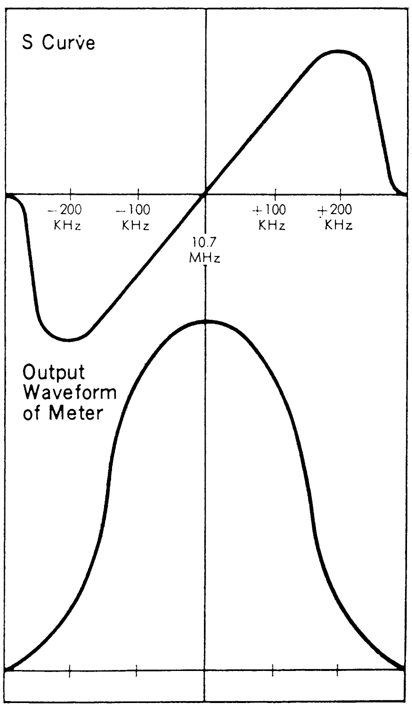


Fig. 1

AM IF WAVEFORM

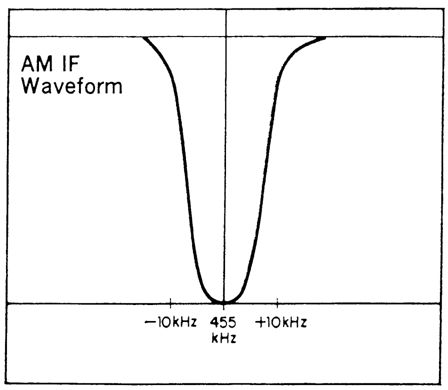


Fig. 2

PRINTED CIRCUIT BOARDS AND PARTS LIST

W: Parts No. **X:** Parts Name **Y:** Stock No. **Z:** Position of Parts

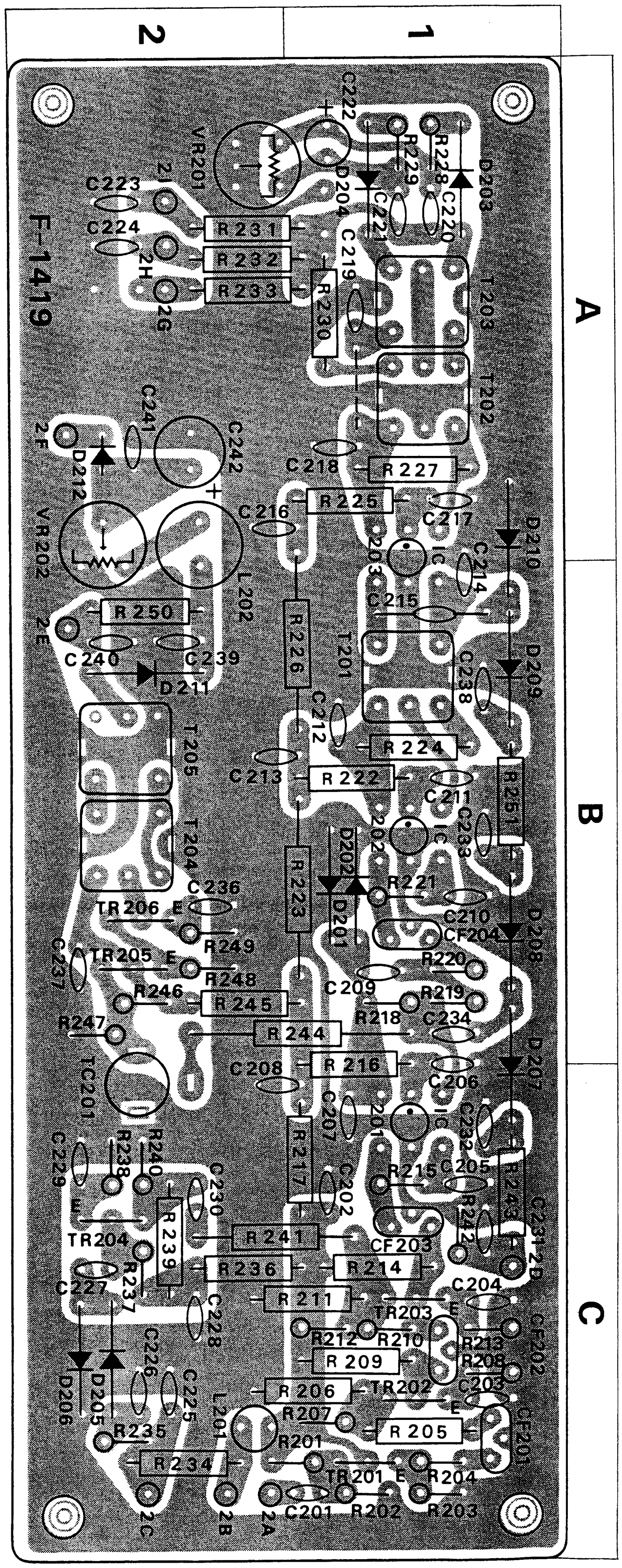
FM IF BLOCK 〈F-1419〉

Stock No. 7520580

W	X	Y	Z
R201	6.8kΩ	0106682	1, 2C
R202	3.3kΩ	0106332	1C
R203	1kΩ	0106102	1C
R204	220Ω	0106221	1C
R205	100Ω	0107101	1C
R206	1.5kΩ	0107152	1, 2C
R207	3.3kΩ	0106332	1C
R208	1kΩ	0106102	1C
R209	680Ω	0107681	1C
R210	100Ω	0106101	1C
R211	1.5kΩ	0107152	1, 2C
R212	3.3kΩ	0106332	1, 2C
R213	1kΩ	0106102	1C
R214	680Ω	0107681	1C
R215	680Ω	0106681	1C
R216	10Ω	0107100	1B
R217	4.7Ω	0107479	1, 2C
R218	1kΩ	0106102	1B
R219	220Ω	0106221	1B
R220	220Ω	0106221	1B
R221	680Ω	0106681	1B
R222	10Ω	0107100	1B
R223	4.7Ω	0107479	1, 2B
R224	10kΩ	0107103	1B
R225	10Ω ± 5 % ¼W CR.	0107100	1A
R226	4.7Ω	0107479	1, 2B
R227	6.8kΩ	0107682	1A
R228	1kΩ	0106102	1A
R229	1kΩ	0106102	1A
R230	10Ω	0107100	1A
R231	1kΩ	0107102	2A
R232	18kΩ	0107183	2A
R233	100kΩ	0107104	2A
R234	1MΩ	0107105	2C
R235	330kΩ	0106334	2C
R236	100Ω	0107101	2C
R237	2.2kΩ	0106222	2C
R238	1kΩ	0106102	2C
R239	47kΩ	0107473	2C
R240	15kΩ	0106153	2C
R241	1kΩ	0107102	1, 2C
R242	47kΩ	0106473	1C
R243	47kΩ	0107473	1C
R244	1kΩ	0107102	1, 2B
R245	100Ω	0107101	2B
R246	47kΩ	0106473	2B
R247	15kΩ	0106153	2B
R248	3.3kΩ	0106332	2B
R249	680Ω	0106681	2B
R250	4.7kΩ	0107472	2B
R251	1kΩ	0107102	1B
VR201	10kΩ (B) FM Tuning Meter Adj.	1035130	2A
VR202	47kΩ (B) FM Signal Meter Adj.	1035170	2A
C201	0.001μF $^{+80}_{-50}\%$ 50V CC.	0657102	1, 2C
C202	0.001μF	0657223	1C

W	X	Y	Z
C203	0.022μF	0657223	1C
C204	0.022μF	0657223	1C
C205	0.022μF	0657223	1C
C206	0.022μF	0657223	1B
C207	0.022μF	0657223	1C
C208	0.022μF $^{+80}_{-20}\%$ 50V CC.	0657223	2B
C209	0.022μF	0657223	1B
C210	0.022μF	0657223	1B
C211	0.022μF	0657223	1B
C212	0.022μF	0657223	1B
C213	0.022μF	0657223	2B
C214	0.022μF	0657223	1A
C215	2.2pF 50V CC.	0669003	1B
C216	0.022μF	0657223	2A
C217	0.022μF $^{+80}_{-20}\%$ 50V CC.	0657223	1A
C218	0.022μF	0657223	1A
C219	0.022μF	0657223	1A
C220	100pF ±10% 50V CC.	0660101	1A
C221	100pF	0660101	1A
C222	10μF 16V EC.	0512100	1A
C223	47pF ±10% 50V CC.	0660470	2A
C224	0.022μF	0657223	2A
C225	0.022μF	0657223	2C
C226	0.022μF $^{+80}_{-20}\%$ 50V CC.	0657223	2C
C227	0.001μF	0657102	2C
C228	0.022μF	0657223	2C
C229	0.022μF	0657223	2C
C230	10pF ± 5 % 50V CC.	0661100	2C
C231	100pF	0660101	1C
C232	470pF ±10% 50V CC.	0660471	1C
C233	470pF	0660471	1B
C234	3.9pF 50V CC.	0669002	1B
C236	0.022μF $^{+80}_{-20}\%$ 50V CC.	0657223	2B
C237	0.022μF	0657223	1B
C238	470pF ±10% 50V CC.	0660471	1B
C239	0.022μF	0657223	1B
C240	0.022μF $^{+80}_{-20}\%$ 50V CC.	0657223	2A
C241	0.022μF	0657223	2B, C
TR201		0305571	1C
TR202	2SC380A (O)	0305571	1C
TR203		0305571	1C
TR204		0305791	2C
TR205	2SC930 (D)	0305791	2B
TR206		0305791	2B
IC201		0360070	1C
IC202	μPC555A	0360070	1B
IC203		0360070	1A
D201	IN60	0310330	1B
D202		0310330	1B
D203	IN60P	0311016	1A
D204		0311016	1A

W	X	Y	Z
D205		0310330	2 C
D206		0310330	2 C
D207		0310330	1 B , C
D208	IN60	0310330	1 B
D209		0310330	1 B
D210		0310330	1 A
D211		0310330	2 B
D212	DS430	0340090	2 A
T201		4235860	1 B
T202		4235750	1 A
T203	FM IF Coil	4235760	1 A
T204		4235840	2 B
T205		4235920	2 B
L201	3.3μF Micro Inductor	4900100	2 C
L201	33mH Micro Inductor	4900180	2 A
CF201		0910182	1 C
CF202		0910182	1 C
CF203	SFE10.7MD	0910182	1 C
CF204		0910182	1 B
TC201	10pF Ceramic Trimmer Capacitor	1230050	2 C
	F-1419 Printed Circuit Board	2520350	



Abbreviations

CR : Carbon Resistor

CeR: Cement Resistor

CC : Ceramic Capacitor

EC : Electrolytic Capacitor

MC : Mylar Capacitor

SC : Styrol Capacitor

PRINTED CIRCUIT BOARDS AND PARTS LIST

W: Parts No. **X:** Parts Name **Y:** Stock No. **Z:** Position of Parts

FM MPX BLOCK <F-1420E>

Stock No. 7540750

W	X	Y	Z
R401	1kΩ	0106102	2 C
R402	1kΩ	0106102	1 B
R403	68kΩ	0106683	2 C
R404	220kΩ	0106224	1 C
R405	68kΩ	0106683	1 C
R406	22kΩ	0106223	1 C
R407	1.2kΩ	0106122	1 C
R408	150kΩ	0106154	1 C
R409	10kΩ	0106103	2 C
R410	33kΩ	0106333	2 C
R411	47kΩ	0106473	2 C
R412	33kΩ	0106333	2 B, C
R413	470Ω	0106471	2 B
R414	3.3kΩ	0106332	2 C
R415	100kΩ	0106104	2 B
R416	10kΩ	0106103	2 B
R417	10kΩ	0106103	2 B
R418	100kΩ	0106104	2 B
R419	100kΩ	0106104	2 B
R420	10kΩ	0106103	1, 2 B
R421	10kΩ	0106103	1 B
R422	100kΩ	0106104	1 B
R423	68kΩ	0106683	2 B
R424	100kΩ	0106104	2 A
R425	100kΩ	0106104	1, 2 A
R426	15kΩ	0106153	1 A, B
R427	15kΩ	0106153	1 B
R428	100Ω ± 5 % ¼W CR.	0106101	2 A
R429	10kΩ	0106103	2 A
R430	10kΩ	0106103	1 A
R431	470Ω	0106471	2 A
R432	470Ω	0106471	1 A
R433	1.5kΩ	0106152	1 A
R434	10kΩ	0106103	1 A
R435	10kΩ	0106103	2 A
R436	1MΩ	0106105	3 A
R437	1MΩ	0106105	3 A
R438	2.2kΩ	0106222	1 C
R439	33kΩ	0106333	2 C
R440	6.8kΩ	0106682	2 C
R441	3.3kΩ	0106332	3 C
R442	33Ω	0106330	3 C
R443	1kΩ	0106102	2, 3 C
R444	47kΩ	0106473	3 C
R445	22kΩ	0106223	3 C
R446	47kΩ	0106473	3 C
R447	47kΩ	0106473	2 B
R448	22kΩ	0106223	2 C
R449	22kΩ	0106223	3 B, C
R450	8.2kΩ	0106822	3 B
R451	47Ω	0106470	3 B
R452	1.5kΩ	0106152	2, 3 B
R453	100Ω	0106101	2 B
R454	100kΩ	0106104	3 B
R455	120kΩ	0106124	3 B

W	X	Y	Z
R456	47Ω	0106470	3 A, B
R457	3.3kΩ	0106332	3 A
R458	10kΩ ± 5 % ¼W CR.	0106103	2, 3 A
R459	4.7kΩ	0106472	3 A
R460	47Ω	0106470	2, 3 A
VR401	1kΩ (B) Stereo Separation Adj.	1035070	1 B
VR402	220kΩ (B) Muting Adj.	1035210	3 B, C
C401	10μF 25V EC.	0513100	2 C
C402	47 pF ±10% 50V CC.	0660470	2 C
C403	0.047μF ±10% 50V MC.	0601477	1 C
C404	6800 pF ± 5 % 50V SC.	0629001	1 B, C
C405	0.047μF ±10% 50V MC.	0601477	2, 3 C
C406	47μF 6.3V EC.	0510470	2 B
C407	10μF 25V EC.	0513100	1 B
C408	10μF	0513100	2 A, B
C409	47μF 16V EC.	0512470	1 A, B
C410	10μF 25V EC.	0513100	1 B
C411	47μF 16V EC.	0512470	1 B
C412	0.0068μF ± 5 % 50V MC.	0600686	2 A
C413	0.0068μF	0600686	2 A
C414	100μF 25V EC.	0513101	2 A
C415	0.047μF ±10% 50V MC.	0601477	3 A
C416	0.047μF	0601477	3 A
C417	220 pF ± 5 % 50V SC.	0620221	2 C
C418	1000 pF	0620102	2 C
C419	100 pF ± 5 % 50V SC.	0620101	2 C
C420	680 pF	0620681	3 C
C421	1μF 50V EC.	0515109	3 C
C422	0.15μF	0601158	3 C
C423	0.047μF ±10% 50V MC.	0601477	3 C
C424	0.047μF	0601477	3 C
C425	0.022μF $^{+80}_{-20}$% 50V CC.	0657223	3 B
C426	100μF 25V EC.	0513101	2 B
C427	10μF 16V EC.	0512100	3 B
C428	0.022μF $^{+80}_{-20}$% 50V CC.	0657223	3 B
C429	3.3μF	0513339	3 B
C430	100μF 25V EC.	0513101	2, 3 B
C435	3.3μF	0513339	
C436	0.0012μF ± 5 % 50V MC.	0600126	
C437	0.0012μF	0600126	
TR401	2SC871R (F)	0305475	1 C
TR402	2SC711 (E, F)	0305731, 2	1 C
TR403	2SC678 (6)	0300291	2 B
TR404		0305475	2 A
TR405	2SC871R (F)	0305475	1 A
TR406		0305475	1 A
TR407	2SC634A (6)	0305891	3 A
TR408		0305891	3 A
TR409	2SC711 (E, F)	0305731, 2	2, 3 C
TR410	2SC634A (6)	0305891	3 B, C
TR411		0305733	3 C
TR412	2SC711 (G)	0305733	3 B
TR413		0305733	2 B, C
TR414	2SC735 (Y)	0305641	3 B, C

W	X	Y	Z
TR415		0305731, 2	3 B
TR416	2SC711 (E, F)	0305731, 2	3 B
TR417		0305731, 2	3 A
TR418	2SA678 (6)	0300291	2, 3 A
TR419	2SC634A (6)	0305891	3 C
D401	IN34A	0310400	2 C
D402		0310400	2 C
D403		0311180 or 0311160	2 B
D404		0311180 or 0311160	2 B
D405	IS1588 or IS2473	0311180 or 0311160	1, 2 B
D406		0311180 or 0311160	1, 2 B
D407	IN34A	0310400	3 C
D408		0310400	3 C
L401	SLV-40S MPX Coil	4240510	1 C
L402	4.7mH ± 5 % Micro Inductor	4900170	2 C
LC401	SMU-203S LC Unit	4240490	1, 2 B C
	F-1420 Printed Circuit Board	2540280	

LAMP HOLDER BLOCK <F-1374>

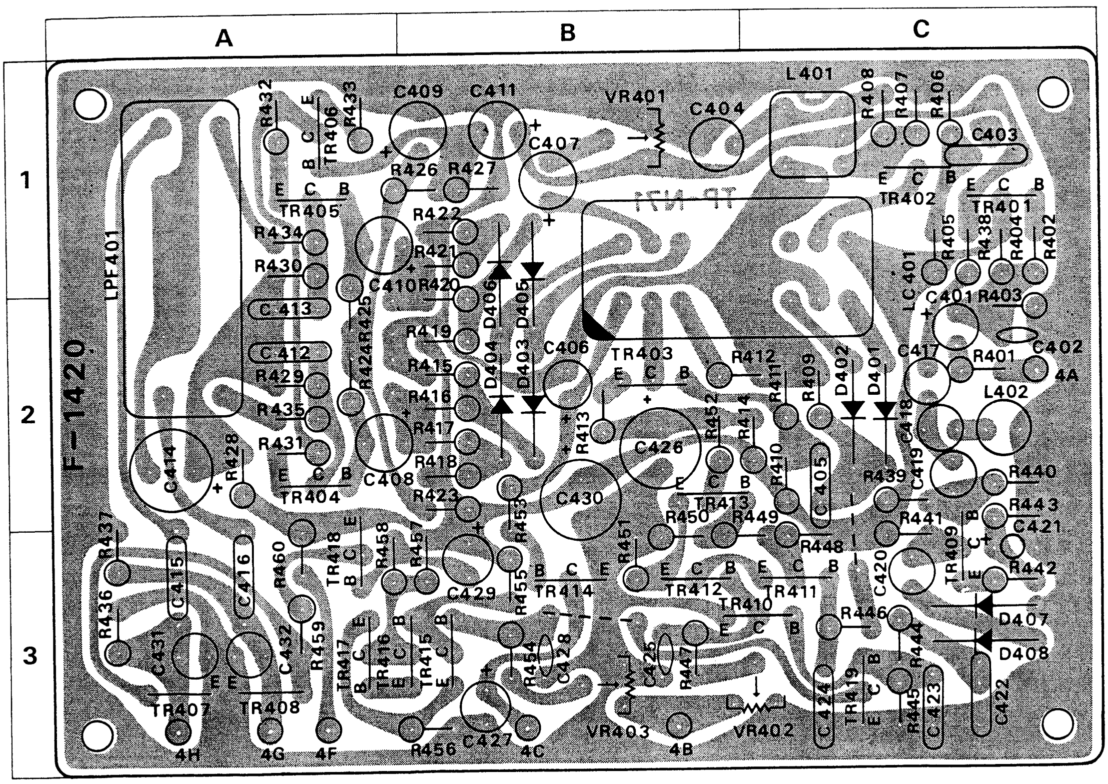
Stock No. 7590810

W	X	Y
R028	18Ω ± 5 % ¼W CR.	0107180
	Fuse Holder pin(× 10)	2310050
	F-1374 Printed Circuit Board	2590750

TERMINAL BLOCK <F-1451>

Stock No. 7591202

W	X	Y
R025	3.3kΩ ± 5 % ¼W CR.	0107332
R026	3.3kΩ	0107332
	F-1451 Printed Circuit Board	2591220



PRINTED CIRCUIT BOARDS AND PARTS LIST

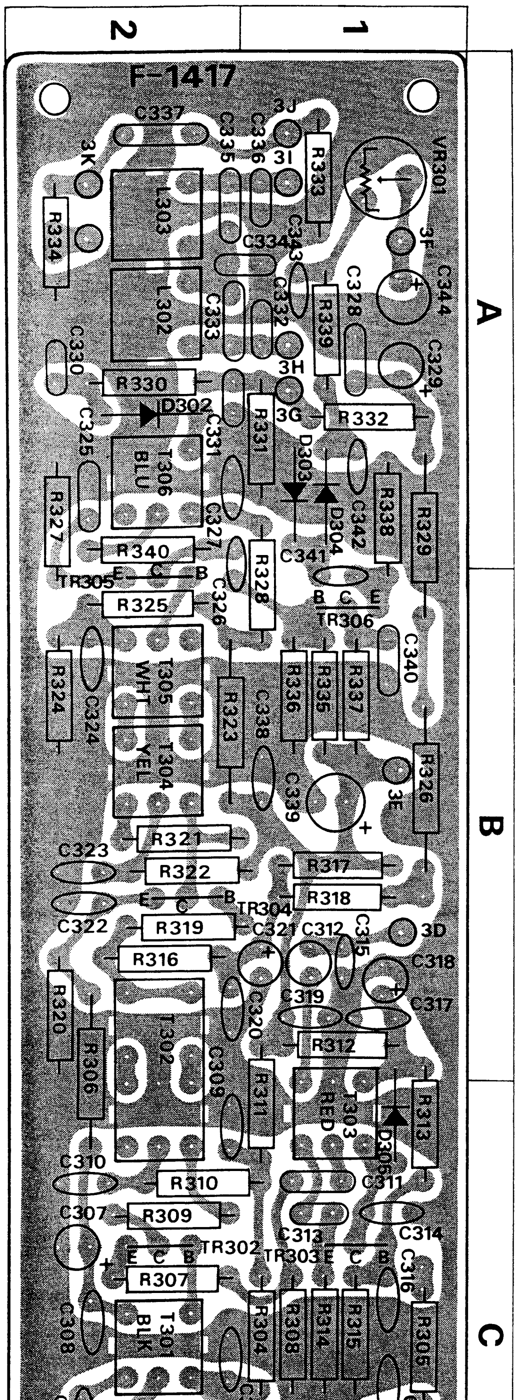
W: Parts No. **X:** Parts Name **Y:** Stock No. **Z:** Position of Parts

AM BLOCK <F-1417A>

Stock No. 7530260

W	X	Y	Z
R301	10kΩ	0107103	1, 2C
R302	1kΩ	0107102	1, 2C
R303	3.3kΩ	0107332	2C
R304	100Ω	0107101	1C
R305	10kΩ	0107103	1C
R306	10kΩ	0107103	2B, C
R307	22Ω	0107220	2C
R308	1kΩ	0107102	1C
R309	470Ω	0107471	2C
R310	100Ω	0107101	1, 2C
R311	47Ω	0107470	1B, C
R312	1kΩ	0107102	1B
R313	22kΩ	0107223	1B, C
R314	1kΩ	0107102	1C
R315	3.3kΩ	0107332	1C
R316	1kΩ	0107102	2B
R317	150kΩ	0107154	1B
R318	5.6kΩ	0107562	1B
R319	10kΩ	0107103	2B
R320	1.5kΩ ± 5 % ¼W CR.	0107152	2B
R321	100kΩ	0107104	2B
R322	100Ω	0107101	2B
R323	47Ω	0107470	2B
R324	4.7kΩ	0107472	2B
R325	10kΩ	0107103	2B
R326	1.8kΩ	0107182	1B
R327	1kΩ	0107102	2A
R328	100Ω	0107101	1A, B
R329	1.8kΩ	0107182	1A, B
R330	1kΩ	0107102	2A
R331	10kΩ	0107103	1A
R332	18kΩ	0107183	1A
R333	10kΩ	0107103	1A
R334	47kΩ	0107473	2A
R335	15kΩ	0107153	1B
R336	22kΩ	0107223	1B
R337	100Ω	0107101	1B
R338	2.2kΩ	0107222	1A, B
R339	1kΩ	0107102	1A
R340	100Ω	0107101	2A
VR301	10kΩ (B) AM Meter Adj.	1035130	1A
C301	0.022μF $^{+80}_{-20}$% 25V CC.	0656223	1C
C302	1μF 50V EC.	0515109	1C
C303	0.047μF	0656473	1C
C304	0.047μF $^{+80}_{-20}$% 25V CC.	0656473	2C
C305	0.022μF	0656223	2C
C306	0.047μF	0656473	2C
C307	1μF 50V EC.	0515109	2C
C308	0.047μF	0656473	2C
C309	0.047μF $^{+80}_{-20}$% 25V CC.	0656473	2C
C310	0.047μF	0656473	2C
C311	0.01μF ±10% 50V MC.	0601107	1C
C312	430pF ± 5 % 50V SC.	0620431	1B

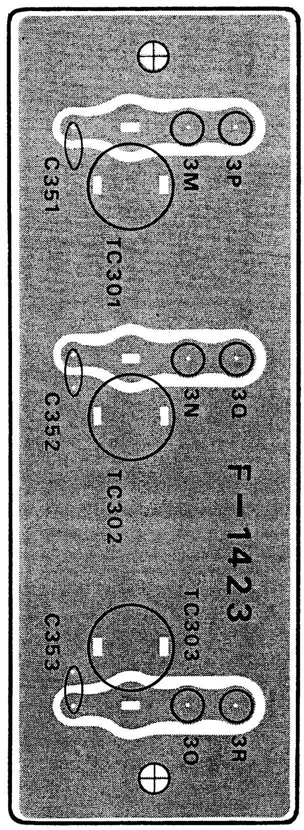
W	X	Y	Z
C313	0.01μF ±10% 50V MC.	0601107	1C
C314	10pF ±10% 50V CC.	0660100	1C
C315	22pF	0660220	1B
C316	0.047μF $^{+80}_{-20}$% 25V CC.	0656473	1C
C317	0.047μF	0656473	1B
C318	10μF 16V EC.	0512100	1B
C319	0.047μF $^{+80}_{-20}$% 25V CC.	0656473	1B
C320	0.047μF	0656473	2B
C321	1μF 50V EC.	0515109	1B
C322	0.047μF	0656473	2B
C323	0.047μF $^{+80}_{-20}$% 25V CC.	0656473	2B
C324	0.047μF	0656473	2B
C325	0.047μF	0656473	2A
C326	47pF ±10% 50V CC.	0660470	2A, B
C327	0.047μF $^{+80}_{-20}$% 25V CC.	0656473	2A
C328	0.047μF	0656473	1A
C329	4.7μF 25V EC.	0513479	1A
C330	0.0047μF	0601476	2A
C331	0.0033μF	0601336	2A
C332	0.0068μF	0601686	1A
C333	0.0047μF ±10% 50V MC.	0601476	2A
C334	0.01μF	0601107	1, 2A
C335	0.01μF	0601107	2A
C336	0.01μF	0601107	1A
C337	0.047μF	0601477	2A
C338	0.047μF $^{+80}_{-20}$% 25V CC.	0656473	1B
C339	47μF 16V EC.	0512470	1B
C340	0.047μF	0656473	1B
C341	0.022μF $^{+80}_{-20}$% 25V CC.	0656223	1B
C342	0.022μF	0656223	1A
C343	0.022μF	0656223	1A
TR301	2SC403C (4)	0305992	2C
TR302		0305992	2C
TR303	2SC403C (3)	0305991	1C
TR304	2SC403C (4)	0305992	1B
TR305		0305992	2B
TR306	2SC403C (3)	0305991	1B
D301	1N60	0310332	1C
D302	1S1007	0311090	2A
D303	1N60	0310332	1A
D304		0310332	1A
D305	1S1555	0311040	1C
T301	2G-054 AM RF Coil	4210180	2C
T302	YEL-455E2 Ceramic Filter	0910180	2B, C
T303	2G-017 AM OSC Coil	4220480	1A, B
T304	IG-058	4230590	2B
T305	IG-059 AM IF Coil	4230600	2B
T306	IG-057	4230580	2A
L301	3.3μH Micro Inductor	4900100	2C
L302	95mH Filter Coil	4290200	2A
L303		4290200	2A
	F-1417 Printed Circuit Board	2530160	



AM TRIMMER BLOCK ⟨F-1423⟩

Stock No. 7591280

W	X	Y
C351 C353	10 pF 10 pF } ±10% 50V CC.	0660100 0660100
TC301 TC302 TC303	20 pF 20 pF } Ceramic Trimer 20 pF	1230060 1230060 1230060
	F-1423 Printed Circuit Board	2591280



METER POINTER ILLUMINATION BLOCK ⟨F-2068⟩

Stock No. 7591450

W	X	Y
R031(032)	10Ω ±5% ¼W Fuse Resistor	0191100
PL011(013) PL012(014)	5V 60mA Lamp 6V 60mA Lamp	0400100, 1 0400100, 1
	F-2068 Printed Circuit Board	2591420

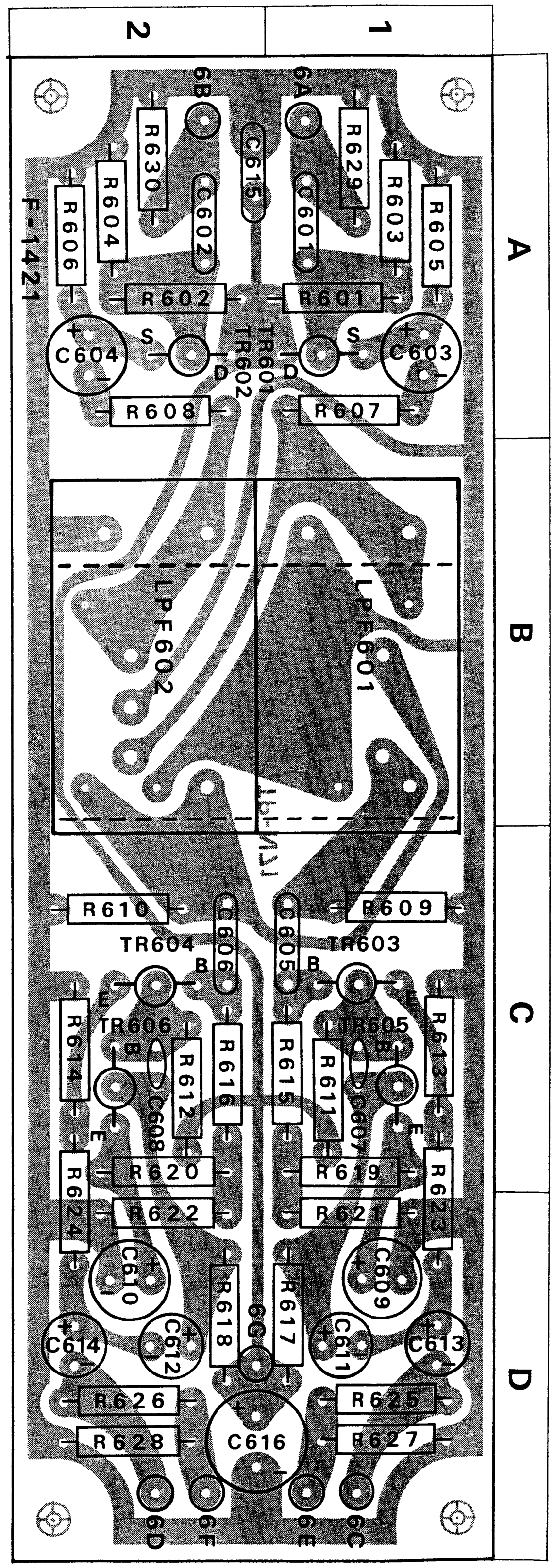
PRINTED CIRCUIT BOARDS AND PARTS LIST

W: Parts No. **X:** Parts Name **Y:** Stock No. **Z:** Position of Parts

FILTER BLOCK 〈F-1421〉

Stock No. 7591290

W	X	Y	Z
R601	1MΩ	0107105	1 A
R602	1MΩ	0107105	2 A
R603	1MΩ	0107105	1 A
R604	1MΩ	0107105	2 A
R605	4.7kΩ	0107472	1 A
R606	4.7kΩ	0107472	2 A
R607	2.2kΩ	0107222	1 A
R608	2.2kΩ	0107222	2 A
R609	3.3kΩ	0107332	1 C
R610	3.3kΩ	0107332	2 C
R611	100kΩ	0107104	1 C
R612	100kΩ	0107104	2 C
R613	2.2kΩ	0107222	1 C
R614	2.2kΩ	0107222	2 C
R615	100kΩ ± 5% ¼W CR.	0107104	1 C
R616	100kΩ	0107104	2 C
R617	6.8kΩ	0107682	1 D
R618	6.8kΩ	0107682	2 D
R619	1.2kΩ	0107122	1 C
R620	1.2kΩ	0107122	2 C
R621	560Ω	0107561	1 D
R622	560Ω	0107561	2 D
R623	8.2kΩ	0107822	1 C, D
R624	8.2kΩ	0107822	2 C, D
R625	47kΩ	0107473	1 D
R626	47kΩ	0107473	2 D
R627	22kΩ	0107223	1 D
R628	22kΩ	0107223	2 D
R629	1MΩ	0107105	2 D
R630	1MΩ	0107105	2 A
C601	0.15μF ±10% 50V MC.	0601158	1 A
C602	0.15μF	0601158	2 A
C603	33μF 25V EC.	0513330	1 A
C604	33μF	0513330	2 A
C605	0.15μF ±10% 50V MC.	0601158	1 C
C606	0.15μF	0601158	2 C
C607	47 pF ±10% 50V CC.	0660470	1 C
C608	47 pF	0660470	2 C
C609	100μF 6.3V EC.	0510101	1 D
C610	100μF	0510101	2 D
C611	10μF 25V EC.	0513100	1 D
C612	10μF	0513100	2 D
C613	10μF	0513100	1 C
C614	10μF	0513100	2 D
C615	0.047μF ±10% 50V MC.	0601477	2 A
C616	100μF 25V EC.	0513101	1, 2 D
TR601	2SK30 (GR)	0370103	1 A
TR602		0370103	2 A
TR603	2SC871R (F)	0305475	1 C
TR604		0305475	2 C
TR605		0305475	1 C
TR606		0305475	2 C
LPF601	BL-13 Low Pass Filter	0910190	1 B
LPF602		0910190	2 B
	F-1421 Printed Circuit Board	2591190	

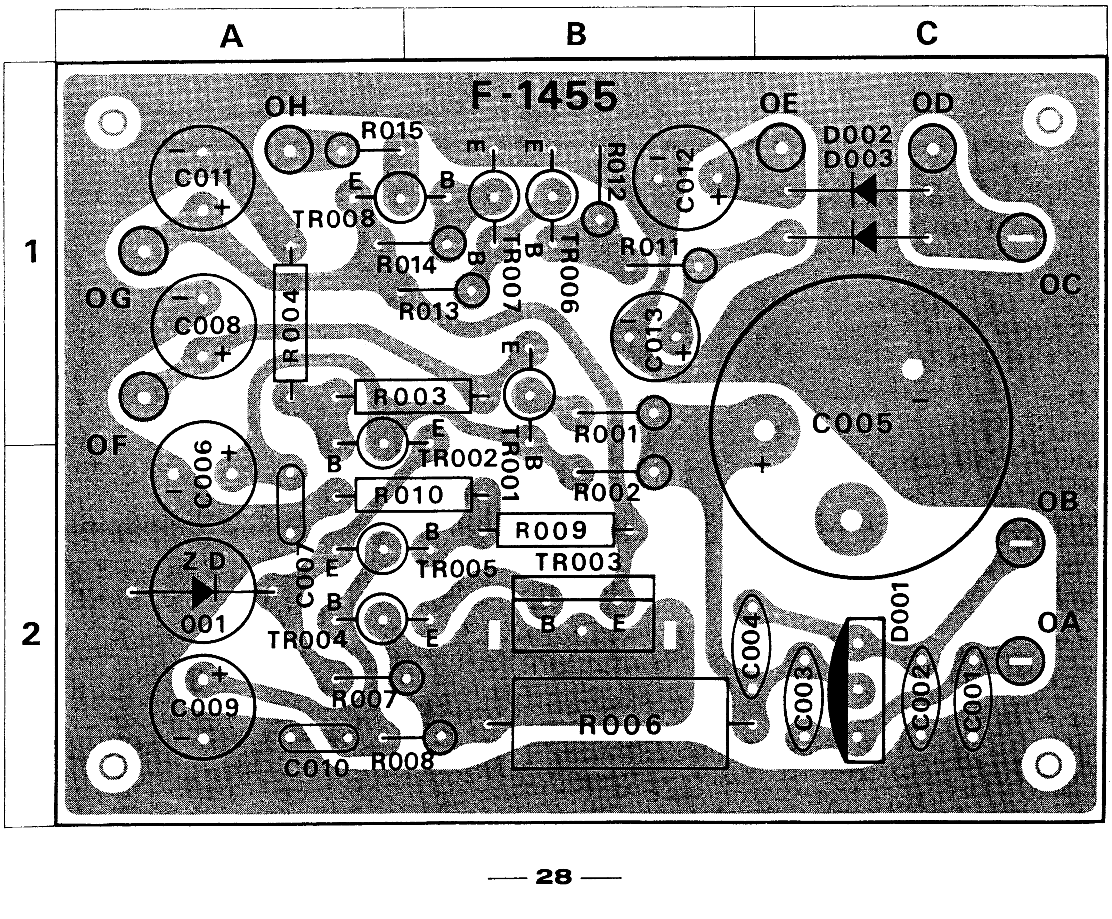


POWER SUPPLY BLOCK <F-1455>

Stock No. 7500710

W	X	Y	Z
R001	22Ω	0106220	1 B
R002	4.7kΩ ± 5 % ¼W CR.	0106472	2 B
R003	39kΩ	0107393	1 A
R004	18kΩ	0107183	1 A
R006	150Ω ±10% 2W CeR.	0182151	2 A, B
R007	3.3kΩ	0106332	2 A
R008	10kΩ	0106103	2 A
R009	10kΩ	0107103	2 A, B
R010	12kΩ	0107123	2 A
R011	5.6kΩ ± 5 % ¼W CR.	0106562	1 B
R012	5.6kΩ	0106562	1 B
R013	100kΩ	0106104	1 A
R014	10kΩ	0106103	1 A
R015	4.7kΩ	0106472	1 A
C001	0.0047µF	0659010	2 B
C002	0.0047µF $^{+80}_{-20}$% 500V CC.	0659010	2 B
C003	0.0047µF	0659010	2 B
C004	0.0047µF	0659010	2 B
C005	1000µF 50V EC.	0549104	1, 2 B
C006	100µF 25V EC.	0513101	1, 2
C007	0.01µF ±10% 50V MC.	0601107	2 A

W	X	Y	Z
C008	100µF 25V EC.	0513101	1 A
C009	100µF 16V EC.	0512101	2 A
C010	0.022µF ±10% 50V MC.	0601227	2 A
C011	100µF 16V EC.	0512101	1 A
C012	220µF 10V EC.	0511221	1 B
C013	3.3µF 50V EC.	0515339	1 B
TR001	2SD330 (E, F)	0308362, 3	1, 2 A
TR002	2SC711 (E, F)	0305731, 2	1, 2 A
TR003	2SD313 (E, F)	0308392, 3	2 A, B
TR004		0305731, 2	2 A
TR005	2SC711 (E, F)	0305731, 2	2 A
TR006		0305731, 2	1 A
TR007		0305731, 2	1 A
TR008	2SA678 (6)	0300291	1 A
D001	10DC-1	0310680	2 B
D002	10D-1	0310340	1 B
D003		0310340	1 B
ZD001	ZD1-5	0315570	2 A
	F-1455 Printed Circuit Board	2500600	



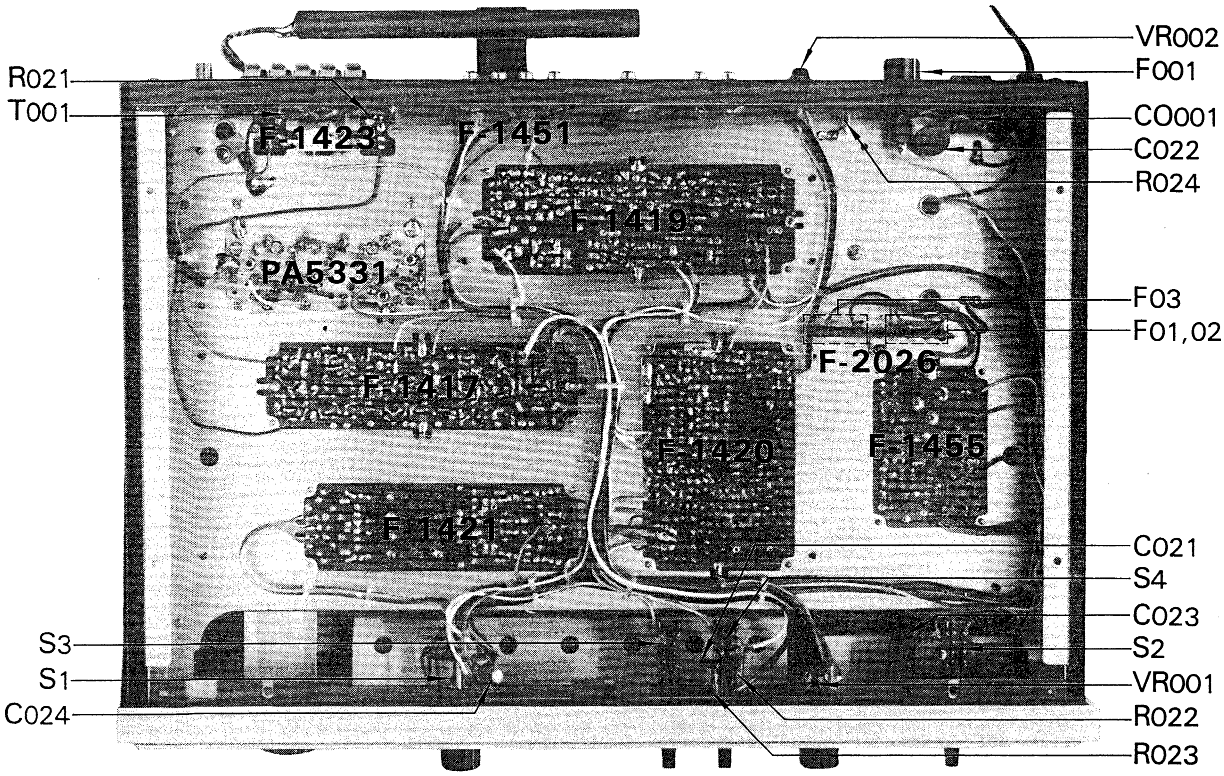
OTHER PARTS AND THEIR LOCATION ON CHASSIS

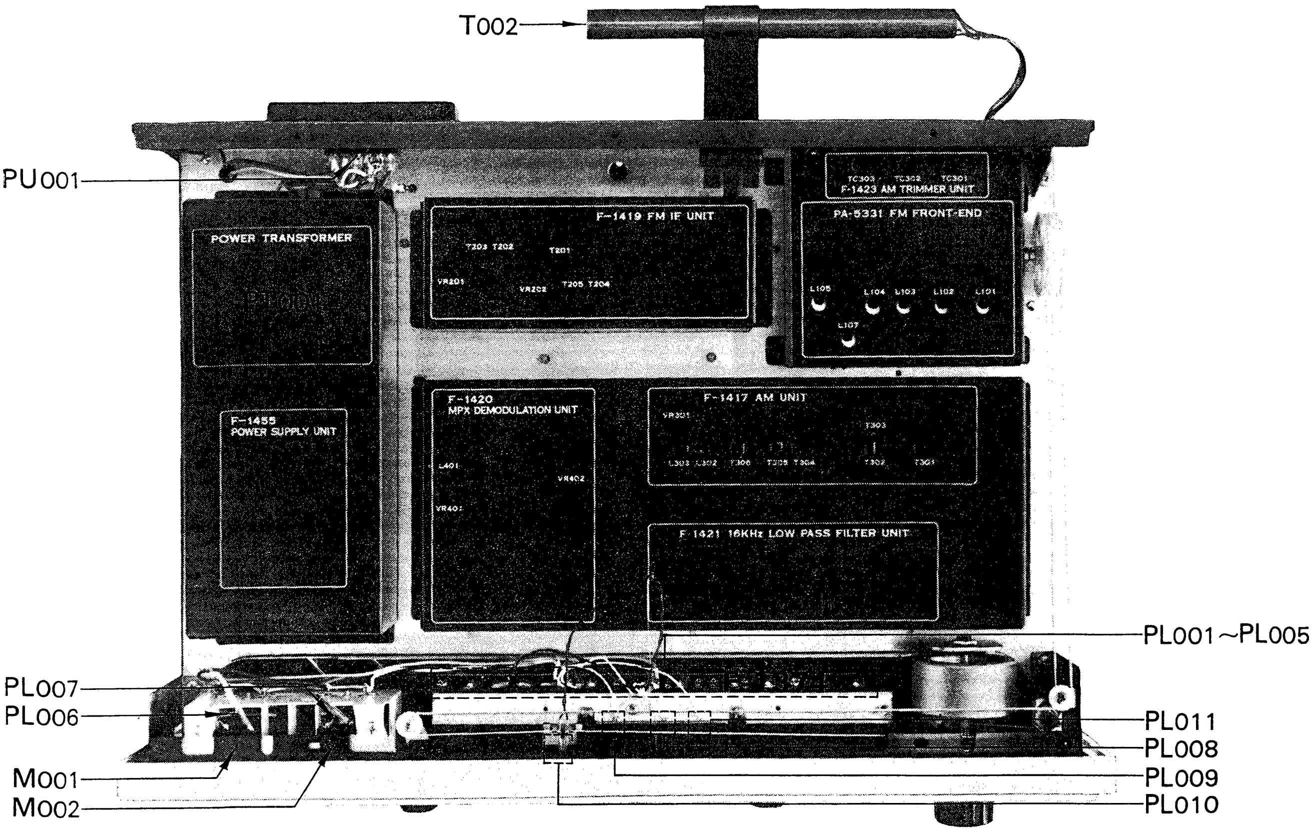
W: Parts No. **X:** Parts Name **Y:** Stock No.

OTHER PARTS

W	X	Y
R021	1.2kΩ ±5% ¼W CR.	0107122
R022	1.2kΩ ±5% ¼W CR.	0107122
R023	4.7kΩ ±5% ¼W CR.	0107472
R024	100kΩ ±5% ¼W CR.	0107104
R027	1.8kΩ ±5% ¼W CR.	0107182
VR001	20kΩ (B) X2 Output Level Adj.	1010810
VR002	100kΩ (B) Muting Level Adj.	1005041
C021	0.0022μF ±10% 50V MC.	0601226
C022	0.0047μF $^{+80}_{-20}$% 250V MC.	0659802
C023	0.01μF $^{+80}_{-20}$% 250V MC.	0659801
C024	100μF 6.3V E C.	0510101
PT001	Power Transformer	4001191
T001	300Ω : 75Ω Baloon	4290021
T002	AM Bar Antenna	4200540
L001	1μH Micro Inductor	4900140
L002	1μH Micro Inductor	4900140
L003	1μH Micro Inductor	4900140
M001	S-3 Signal Meter	4300580
M002	T-3 Tuning Meter	4300590
S1	Selector Switch Y-2-7-3	1102200
S2	Power Switch	1170310
S3	Muting Switch	1170270
S4	Noise Suppressor Switch	1170270
CO001	AC Outlet	2450040
F001	250V 1A Power Fuse (100/117V)	0431222
	250V 0.5A Power Fuse (220/240V)	0431212
	Fuse Holder	2300020
F01	250V 4A Wired-in-Fuse	0432890
F02	250V 0.5A Wired-in-Fuse	0432810
F03	250V 0.5A Wired-in-Fuse	0432810
	F-2026 Printed Circuit Board	2591370
PL001	7V 330mA Dial Scale Lamp	0420040
PL002	7V 330mA Dial Scale Lamp	0420040
PL003	7V 330mA Dial Scale Lamp	0420040
PL004	7V 330mA Dial Scale Lamp	0420040
PL005	7V 330mA Dial Scale Lamp	0420040
PL006	7V 330mA Signal Meter Lamp	0420040
PL007	7V 330mA Tuning Merer Lamp	0420040
PL008	7V 160mA FM Indicator	0400170
PL009	7V 160mA AM Indicator	0400170
PL010	6V 75mA Dial Pointer Lamp	0400200
PL011	6V 100mA Stereo Indicator	0400161
	Lamp Socket (×2)	2310080
	Power Cord	3800020
	Lup Board	2110060

W	X	Y
PU001	Voltage Selector Socket	2410080
	Voltage Selector Plug	2410090
	PA 5331 U07 FM Frontend	7510570
	F-1449 FM IF Unit	7520580
	F-1420E FM MPX Unit	7540750
	F-1417A AM Unit	7530260
	F-1423 AM Trimer Unit	7591280
	F-1421 Filter Unit	7591290
	F-1455 Power Supply Unit	7500710
	F-1451 Terminal Unit	7591220
	F-1374 Lamp Holder Unit	7590810
	F-2068 Meter Pointer Illumination Unit(x2)	7591450


R021
T001
F-1423
F-1451
F-1419
PA5331
F-1417
F-1420
F-1421
F-2026
F-1455
VR002
F001
CO001
C022
R024
F03
F01,02
C021
S4
C023
S2
VR001
R022
R023
S3
S1
C024


T002
PU001
POWER TRANSFORMER
F-1455
POWER SUPPLY UNIT
F-1419 FM IF UNIT
F-1423 AM TRIMMER UNIT
PA-5331 FM FRONT-END
F-1420
MPX DEMODULATION UNIT
F-1417 AM UNIT
F-1421 16KHz LOW PASS FILTER UNIT
PL001~PL005
PL007
PL006
M001
M002
PL011
PL008
PL009
PL010